DOCUMENT RESUME

ED 272 232 JC 860 413

AUTHOR	Minckley, Barbara B., Ed.; Walters, Mary Dale, Ed.
TITLE	Health Care Cost Containment: Dilemmas and Solutions. Midwest Alliance in Nursing Fall Workshop (Dearborn, Michigan, September 1983).
INSTITUTION	Midwest Alliance in Nursing, Inc., Indianapolis, IN.
SPONS AGENCY	Kellogg Foundation, Battle Creek, Mich.
REPORT NO	ISBN-0-942146-07-7
PUB DATE	83
NOTE	193p.
PUB TYPE	Reports - Descriptive (141) -- Collected Works - Conference Proceedings (021)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	*Cost Effectiveness; *Costs; *Economic Factors; Hospitals; *Medical Services; Nurses; *Nursing
IDENTIFIERS	*Cost Containment; *Health Care Costs

ABSTRACT

Focusing on various issues related to rapidly rising health care costs, and the dilemmas these pose for health care professionals these proceedings include the following papers: (1) "A Federal Perspective: Nursing under Prospective Payment," by Carolyne K. Davis; (2) "Providers' Panel: Facing the Issues," by Connie Curran, Jeptha Dalston, David Hollister, and Marianne Udow; (3) "Policies for Nurses in Advanced Practice in a Time of Physician Surplus," by Martha Bergsten; (4) "Results-Oriented Programming: Cost Containment through Staff Development," by Bonnie K. Hagerty; (5) "Nursing Strategies to Promote Cost Effectiveness: Managing Disturbed Behavior on Medical/Surgical Nursing Units," by Maureen Corcoran; (6) "The St. Anthony Park Block Nurse Program," by Barbara O'Grady and Marjorie Jamieson; (7) "Factors, Strategies, and Opportunities for Cost Containment in Nursing Service," by Barbara V. Tebbitt; (8) "Cost Containment in Nursing Education," by Carol J. Peterson; (9) "Quality, Cost, and Cost Containment," by Avedis Donabedian; (10) "Continuing Education/Staff Development: Cost Containment Strategies," by Beverly Freeman and Patricia Dolphin; (11) "Developing Productivity Standards in Nursing," by Thomas Lant and Mary G. Nash; (12) "Development and Implementation of Management Engineering within the Nursing Department as a Cost Containment Strategy," by Madeline Zaworski and Mary Muzilla; (13) "Comparison of Two Methods of Hospital Orientation in Cost Effectiveness and Practice Efficacy for Registered Nurses," by Barbara J. Flewellyn; (14) "Home IV Program: A Collaborative Effort to Contain Cost," by Connie May; (15) "Cost and Benefits of Health Care Cost Containment," by Edward P. Ehlinger; (16) "Collaborative Group Education: A Cost-Effective Alternative," by Kathleen A. Baldwin, Betty Boesen, and Barbara R. Jojns; (17) "Work Study--A Management Tool," by Christine Gelb and Virginia Richardson; (18) "Some Research Issues in Cost Benefit Analysis in Nursing: A Nursing Perspective," by Nancy S. Creason; (19) "Community Hospital Education Services: A System of Shared Resources," by Cheryl M. Jones; (20) "How Michigan Explored Its Health Care Cost Dilemma," by Cheryl Klouzal Schmidt; and (21) Cost Containment: Staff Nurses Can Make a Difference," by Barbara Trottier. (AYC)

ED272232

HEALTH CARE

Cost Containment:

Dilemmas & Solutions

MIDWEST ALLIANCE IN NURSING

FALL WORKSHOP

SEPTEMBER 1983

JC 860 413

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

M. M. Pettengill

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

HEALTH CARE COST CONTAINMENT: DILEMMAS AND SOLUTIONS

Edited by

Barbara B. Minckley, DNSc., FAAN
Executive Director

Mary Dale Walters, BA
Public Relations Coordinator

Midwest Alliance in Nursing, Inc.
Program Meeting - September, 1983

Midwest Alliance in Nursing
Room 108-BR, Indiana University
1226 W. Michigan Street
Indianapolis, IN 46223

Published by the Midwest Alliance in Nursing, Inc.
Room 108-BR, Indiana University, 1226 W. Michigan Street
Indianapolis, Indiana 46223 317/264-3255

Library of Congress Cataloging in Publication Data

Midwest Alliance in Nursing. Program Meeting (1983: Dearborn Michigan)

Health Care Cost Containment: Dilemmas and Solutions

1. Nursing--Economic conditions--United States.
2. Hospitals--United States--Cost control. 3. Hospitals
--United States--Prospective payment. I. Minckley,
Barbara B., 1925- . II. Walters, Mary Dale,
1957- . (DNLM: 1. Cost Control--congresses.
2. Cost Control--trends--congresses. 3. Nursing Services
--economics--congresses. 4. Nursing Service, Hospital--
economics--congresses. WY 77 M629)
RT86.73.H43 1983 338.4'33621'73 84-1131
ISBN 0-942146-07-7

Price: $12.50

Copyright © 1983, Midwest Alliance in Nursing, Inc.

Partially supported by the W. K. Kellogg Foundation

PREFACE

The economic recession, the rapid rise in health care costs, and the dilemmas these posed for health professionals as well as for citizens seeking health care became the inescapable priority of 1981-82. By Fall of 1983 the nation, particularly at federal level, had begun to find solutions to the problem of runaway health care costs.

Dr. Carolyne K. Davis, Administrator of the Health Care Finance Administration, U. S. Department of Health and Human Services provided a detailed description of her department's far-reaching plan to reverse the long-standing policy of retrospective payment to hospitals for Medicare patients. Prospective payment, based on the four years of testing in New Jersey hospitals, was ready for adoption as a national method for health care cost containment.

The impact on health care, and the projected implications for nursing service and education were the themes of MAIN's Fall Workshop on "Health Care Cost Containment: Dilemmas & Solutions".

Drs. Avedis Donabedian and Edward Ehlinger, respectively, viewed the theoretical and practical aspects of cost containment. Dr. Carol Peterson and Barbara Tebbitt presented perspectives from nursing education and service.

Thinking of health care as a limited commodity rather than a universal right challenged traditional ethical assumptions. A Health Providers' panel discussion, moderated by Dr. Connie Curran, presented useful insights into these moral dilemmas; and additional short innovative papers offered a wide variety of avenues for further cost containment effort.

The valuable ideas captured in this volume, are intended to be shared widely among health professionals and to continue the implementation of MAIN's primary purpose to advance and protect the health status of persons in the Midwest.

Pat Schroder, RN, MA, Chair
Midwest Alliance in Nursing
1983-84

Barbara B. Minckley, DNSc., FAAN
Executive Director

Mary Dale Walters
Public Relations Coordinator

Governing Board Members-1983

Pat Schroder, RN, MA, Chair (S) (KS)
Sally Mathis, RN, MS, Vice Chair (S) (IA)
Janet Boyd, RN, PhD, Secretary (E) (MI)
Barbara Tebbitt, RN, MSN, Treasurer (S) (MN)
Helen Hansen, RN, MA, (S) (MO)
Sr. Mary Jaeger, RN, MSN, (S) (SD)
Julia Lane, RN, PhD (E) (IL)
Arlene Mack, RN, FAAN (S) (ND)
Carol Rehtmeyer, RN, MS (E) (NE)
Lydia Reitman, RN, MS (E) (WI)
Sherry Smith, RN, EdD, (E) (IN)
Jeannette Spero, RN, PhD, (E) (OH)
Peggy White, RN, MSN (E) (OK) (Program Committee Liaison)

Program Committee Members

Ruth Barnard (E) (MI)
Carol Casten (E) (IL)
Rosemary Langston (E) (MN)
Marlys Peterson (S) (WI)
Thomas Stenvig (S) (SD)
Madeline Zaworski (S) (OH)

ACKNOWLEDGEMENTS

Our special thanks are due to the ever increasing list of MAIN Member Agencies for their enthusiastic support and participation in MAIN programs and task groups. The editors also express appreciation to the outstanding speakers who contributed their unique gifts of knowledge and innovative ideas for solutions to cost-containment problems.

We are also grateful to MAIN's Administrative Secretary, Vicki Johnson, who prepared all manuscripts for these Proceedings. Finally, the funding support from the W. K. Kellogg Foundation, which has assisted MAIN in organizing and presenting regional programs of quality, is also gratefully acknowledged.

The Editors

TABLE OF CONTENTS

PAGE

A FEDERAL PERSPECTIVE: NURSING UNDER PROSPECTIVE PAYMENT
Carolyne K. Davis, RN, PhD 1

PROVIDERS' PANEL: FACING THE ISSUES
Connie Curran, PhD, Moderator
Jeptha Dalston, PhD
Representative David Hollister
Marianne Udow 7

POLICIES FOR NURSES IN ADVANCED PRACTICE IN A TIME OF PHYSICIAN SURPLUS
Martha Bergsten, RN 17

RESULTS-ORIENTED PROGRAMMING: COST CONTAINMENT THROUGH STAFF DEVELOPMENT
Bonnie K. Hagerty, RN, MS 29

NURSING STRATEGIES TO PROMOTE COST EFFECTIVENESS: MANAGING DISTURBED BEHAVIOR ON MEDICAL/SURGICAL NURSING UNITS
Maureen Corcoran, RN, MSN 43

THE ST. ANTHONY PARK BLOCK NURSE PROGRAM
Barbara O'Grady, RN, MSN
Marjorie Jamieson, RN, MS 51

FACTORS, STRATEGIES, AND OPPORTUNITIES FOR COST CONTAINMENT IN NURSING SERVICE
Barbara V. Tebbitt, RN, MSN 59

COST CONTAINMENT IN NURSING EDUCATION
Carol J. Peterson, RN, PhD, FAAN 73

QUALITY, COST, AND COST CONTAINMENT
Avedis Donabedian, MD, MPH 85

CONTINUING EDUCATION/STAFF DEVELOPMENT: COST CONTAINMENT STRATEGIES
Beverly Freeman, RN, MSN
Patricia Dolphin, RN, MS 99

DEVELOPING PRODUCTIVITY STANDARDS IN NURSING
Thomas Lant, RN, MS
Mary G. Nash, RN, MS 105

TABLE OF CONTENTS

PAGE

DEVELOPMENT AND IMPLEMENTATION OF MANAGEMENT ENGINEERING WITHIN THE NURSING DEPARTMENT AS A COST CONTAINMENT STRATEGY
Madeline Zaworski, RN, MSN, CNAA
Mary Muzilla, MBA 123

COMPARISON OF TWO METHODS OF HOSPITAL ORIENTATION IN COST EFFECTIVENESS AND PRACTICE EFFICACY FOR REGISTERED NURSES
Barbara J. Flewellyn, RN, BSN 127

HOME IV PROGRAM: A COLLABORATIVE EFFORT TO CONTAIN COST
Connie May, RNC, MS 139

COST AND BENEFITS OF HEALTH CARE COST CONTAINMENT
Edward P. Ehlinger, MD, MSPH 147

COLLABORATIVE GROUP EDUCATION: A COST-EFFECTIVE ALTERNATIVE
Kathleen A. Baldwin, RN, MSN
Betty Boesen, RN, BAN
Barbara R. Jones, RN, BSN 155

WORK STUDY - A MANAGEMENT TOOL
Christine Gelb, RN, MSN
Virginia Richardson, RN, MSN, CPNA 159

SOME RESEARCH ISSUES IN COST BENEFIT ANALYSIS IN NURSING: A NURSING PERSPECTIVE
Nancy S. Creason, RN, PhD 165

COMMUNITY HOSPITAL EDUCATION SERVICES: A SYSTEM OF SHARED RESOURCES
Cheryl M. Jones 171

HOW MICHIGAN EXPLORED ITS HEALTH CARE COST DILEMMA
Cheryl Klouzal Schmidt, RN, MS 175

COST CONTAINMENT: STAFF NURSES CAN MAKE A DIFFERENCE
Barbara Trottier, RN 181

Biographical Sketches of the Speakers

CAROLYNE K. DAVIS, PhD is Administrator of the Health Care Financing Administration (HCFA), U.S. Department of Health and Human Services, Washington, D.C. As administrator, Dr. Davis oversees the functions of Medicare and Medicaid programs through which HCFA helps finance health care services for nearly 50 million poor, elderly, and disabled Americans at a cost of $74 billion for fiscal 1983. Prior to her appointment as administrator of HCFA, Dr. Davis was Associate Vice President for Academic Affairs at the University of Michigan, Ann Arbor, Michigan. In addition, she earlier served as Dean of the University of Michigan School of Nursing. She has published numerous articles and research documents dealing with a variety of issues facing the health care system. Dr. Davis received her nursing degree from Johns Hopkins. Her master's in nursing education and doctorate in higher education administration are from Syracuse University.

AVEDIS DONABEDIAN, MD, MPH is the Nathan Sinai Distinguished Professor of Public Health, University of Michigan, Ann Arbor. He has written extensively on the topic of quality assurance in health care with recent particular emphasis on how it will be affected by changing trends. Prior to the University of Michigan, Dr. Donabedian served as faculty member at New York Medical College, and as visiting Lecturer at Harvard University's School of Public Health. Dr. Donabedian is a graduate of The American University of Beirut and Harvard University.

EDWARD P. EHLINGER, MD, MSPH is Director, Division of Personal Health Services, Minneapolis Health Department, Minneapolis, Minnesota. In addition, he is on the faculty at the University of Minnesota's Department of Pediatrics and School of Public Health. Dr. Ehlinger often speaks on public health issues and problems, and recently has written on the implications of introducing competition into the health care system. He earned his undergraduate and medical degrees at the University of Wisconsin, and his master's at the University of North Carolina where he was a Robert Wood Johnson Clinical Scholar.

CAROL W. PETERSON, RN, PhD, FAAN is Dean and Professor, College of Nursing, South Dakota State University, Brookings. Prior to joining the University, Dr. Peterson was Vice President, Educational Development, Evaluation, and Research, St. Mary's Junior College, Minneapolis, Minnesota. Dr. Peterson has served in various consulting capacities related to nursing education including, innovative approaches to health care education, nurse leadership, the development of Associate Degree nursing competencies, and issues in nursing education. She earned her BS, MEd, and PhD at the University of Minnesota.

BARBARA V. TEBBITT, RN, MSN is Senior Associate Director, University of Minnesota Hospitals and Clinics, Minneapolis. In addition, she is Director of Nursing Services. Prior to her present positions, Ms. Tebbitt was Coordinator, Consultant/Education, Department of Nursing Service at the University. Ms. Tebbitt often speaks and writes on current nursing service topics including time management, changing trends for the 1980s, competition, and third party reimbursement. She is a graduate of Alverno College and the University of Minnesota.

A Federal Perspective:
Nursing Under Prospective Payment

by Carolyne K. Davis, RN, PhD

My roots, as you know, are in nursing. So it is with special pleasure that I come here to meet with nurses of the Midwest Alliance in Nursing.

In a few days, our profession faces one of its supreme challenges: For the first time hospitals will be reimbursed by a Medicare prospective payment system.

Prospective payment is one of the most far-reaching changes ever to take place in health care and it has special implications for nursing practice that I want to talk about today. To set the stage for that, I want to begin by telling you what prospective payment is, why it came to be, and how it will be implemented.

Prospective Payment

Let's address the 'why' of prospective payment first. There are several reasons why we need a new system of Medicare payment for hospitals, but the first and most important is that we can no longer afford the present system. It simply is too inflationary in an era of rising health care outlays.

Last year, the nation spent $322 billion for health care. That's about 12.5 percent more than the previous year, and 27 percent of that was paid by Medicare and Medicaid. These programs are meeting their purposes, to be sure, but their costs are rising, particularly in hospitals.

Last year hospital costs rose 12 percent, three times the inflation rate. Over the years, increases of this magnitude have had a dramatic impact on Medicare outlays. In 1967, the total Medicare outlay for hospital care was just over $3 billion. Last year, outlays came to $3 billion a month.

As a result of these increases, Medicare outlays have been outpacing its income, pushing the program's hospital insurance trust fund toward insolvency.

By itself, prospective payment will not rescue Medicare from insolvency. However, it is an important step in the right direction. Just as importantly, it will set the pace and tone of a new era in which competition will be the watchword.

Under the old cost-based reimbursement system hospitals sent Medicare the bills and Medicare payed them. The more a hospital billed, the more revenue it gained. There was no incentive to manage patient care and costs

efficiently and effectively. And hospitals did not have to compete, since they all benefitted equally from this wasteful system.

Prospective payment changes that perverse incentive. It pays a predetermined rate per discharge based on one of 468 payment groups based on 'diagnosis-related groups' (DRGs). These DRGs are based on the patient's diagnosis, age, sex, treatment procedure utilized, and their status at discharge.

Certain hospitals are entirely excluded from the DRG method of payment, as are the costs of medical education and capital expenditures. These will continue to be paid on a cost-based system.

A somewhat involved formula will be used to determine the DRG rate to ensure that area cost differences among hospitals are taken into account. Time does not permit a detailed account of how this is determined, but it will profit you as nurses to gain some understanding of the methodology.

It will suffice to say that prospective payment is designed to provide economic incentives for hospitals to be efficient. Hospitals able to treat patients for less than the DRG rate will profit. Those that do not, must absorb any loss. In other words, the incentive will no longer be to spend, but to save within the parameters of sound medicine, of course.

The Impact on Nursing Practice

Prospective payment has vital ramifications for nursing. In the past, nursing has been regarded as an expense. Henceforth, I believe that nursing will be viewed as a potentially profitable service that can help hospitals treat patients more cost effectively, thereby earning income for the hospital.

Among other things, hospitals must begin planning to ensure that patients are not kept longer than necessary. Patients who languish in hospital beds longer than their condition warrants may well cost a hospital income. In the past, the reverse was true: The longer a patient stayed, the more Medicare was billed and the more revenue the hospital realized.

Since this economic incentive will no longer exist, the role of nursing will change. Henceforth, nurses will be called upon to keep attending physicians apprised of the patient's progress toward recovery, because concentrated efforts will be made to minimize the patient's length of stay, consistent with good standards of medical practice.

Extensive research clearly demonstrates that good nursing care promotes uncomplicated recoveries and is critical in spotting the first signs of complications. Once detected, many complications can be dealt in a manner that will not delay the patient's discharge beyond the normal length of time.

Early discharge planning for patients who have no complications also can save hospitals money and nursing services will come to be regarded as an integral part of that as well. Prompt discharges require individual preparation of the patient in self care activities, a traditional nursing function that now takes on renewed importance. Adequate discharge placing is one component of higher quality care.

The Nursing Role in Avoiding Hospitalization

Prevention of disease and health promotion is another area in which nurses will be needed in the new era ahead. Studies show that the work of outpatient clinic nurses succeed in, among other things, lowering the insulin blood levels of diabetics and keeping down the blood pressure of hypertensive patients, thus avoiding the necessity for hospitalization.

Nurses have traditionally spent more time with patients, which allows them to develop more of a personal and trusting relationship with patients. Much of this person-to-person effort to teach good health practices goes on in clinics, hospitals, the workplace, and in people's own homes. Since nurses serve in all these places, they are at the front lines of the prevention effort.

How Nurses Can Prepare for Prospective Payment

The new kinds of responsibilities nursing will be assuming clearly point to the need for preparing the profession for a new set of duties. As this occurs, nursing will be taking on a higher level of responsibility that will expand its dimensions as a profession. However, success will depend on how well it is prepared to take on this challenge.

Preparation for this is, and should be, one of the single most important priorities of the profession today. This is a break-out opportunity that nursing should not fail to seize in its long quest for greater recognition.

Those present today are by definition the leaders of nursing and the responsibility of preparing the profession for its new role will fall to you.

It takes no crystal ball to suggest the agenda before you:

- First, nurses--and especially those in hospitals--should learn all they can about the prospective payment system and DRGs. This is vital to any understanding of the new role nursing must take on under this new payment system. This is a crucial undertaking, because you cannot contribute to something that you do not fully understand.

- Second, nurses should insist on being represented on hospital committees set up to implement Prospective Payment and contain costs.

- Third, the director of nursing services should ask to serve on the hospital's budget committee and prepare herself for that role. Also, she should be prepared to develop and keep tabs on the nursing service budget. All of this will give the hospital's nursing leadership a working grasp of what needs to be done to provide cost-effective nursing care. It will also make the contributions of the nursing service to cost-effective care more visible to physicians and administrators. This will be particularly important as you reach toward a new level of responsibility in the hospital.

- Fourth, the nursing leadership should start planning now to provide continuing education to staff nurses in patient assessment, discharge planning, and teaching self-care to patients. In addition, nurses should learn how to manage supplies, equipment, and ancillary services more cost-effectively.

- Finally, reports need to be developed that will allow nursing directors to compare nursing costs in similar hospitals. These reports will be of great help to these directors in managing resources, in justifying new positions, and for evaluating nursing productivity in their hospital.

Basic Knowledge Needed

The spate of responsibilities I have just described will demand some boning up in areas with which nurses have not usually concerned themselves. It is all the more crucial that they do now. This includes: The economics of health care, the fiscal management of hospitals, the use of computers in meeting information needs, and perhaps some basic background in the principles of business administration. In addition: future promotions in nursing will depend not only on clinical skills, but also on the individual's ability to understand, plan, and organize cost effective nursing care.

Educational Redirections

All that I have been saying today suggests that we also need to take a fresh look at what is taught at both the undergraduate and graduate levels of nursing. Some schools are moving to meet the emerging educational needs of nurses in this coming era; let us earnestly hope the rest soon follow their example.

The fact is, any nursing curriculum today that fails to equip its students with a sound background in cost effective nursing and the economics of health care is flirting with obsolescence.

At the graduate level nurses should be prepared to step into the growing number of health policy-making positions that I see opening for them in the years ahead.

Everywhere one looks today, women are moving into executive decision-making positions, and nursing -- the single largest female-dominated profession -- should get into the vanguard. If it does not, nursing will lose in the competition to attract the best and the brightest, because young women are increasingly seeking careers where real opportunities beckon.

In conclusion, it is safe to note that medicine in America, to its lasting credit, has made enormous strides forward in saving lives. Marvelous machines and sophisticated techniques that were unknown a few decades ago are part of the standard armamentarium today. But what all of these marvels cannot give us is what health care is really all about -- the simple act of caring. And no one does that better than the American nurse.

The life-saving value of this caring spirit was never made any clearer than in one study that compared various kinds of health care resources with a community's death rate. Only one such resource was found by this study to make an iota of difference in a community's death rate -- <u>The number of nurses per capita</u>.

It is strong evidence indeed that the nursing profession brings to health care a supreme asset -- the caring spirit. It is the one asset that, in an age of marvelous but impersonal medical machinery, we cannot do without.

So I believe with all my heart and every instinct that no health care professional is better poised to blend the spirit of caring with its science than nursing.

And because I believe this, I also believe that nursing must strive to reach the very center of health care decision-making apparatus, for only in this way can it make a difference in the future.

It is, to be sure, a future fraught with dangers and challenges, but one that we dare not fail to address at the present moment. The sum of it all is this: Never has the opportunity been greater for nursing to assert itself as a major shaping force in health care.

In decades to come some historian may look back on the challenges of the 1980's and be able to say: "Health care in America turned a corner then--and we are all the better because of it."

I hope that, among those in the honored ranks who made that turning possible, we will find our profession. If that is to be the case, the moment to act is now--let us seize that moment.

Providers Panel - Facing the Issues

Connie Curran, RN, PhD (Moderator)
Dean, School of Nursing
Medical College of Wisconsin

Representative David Hollister
State Legislature of Michigan

Marianne Udow, MHSA
Director, Health Policy & Development
Blue Cross and Blue Shield of Michigan

Jeptha Dalston, PhD
Executive Director, University Hospitals
University of Michigan, Ann Arbor

Connie Curran:

Representative Hollister, I understand you have some general disagreement with, or some different interpretations from those we heard earlier from Dr. Davis; and I would like you to expand on that, describing your interpretation of the new legislation and what it may do to health care delivery.

Representative Hollister:

I speak as a member of the Michigan legislature who has responsibility for the Medicaid budget, which is both the largest single expenditure of and the fastest growing item in the Michigan budget. It is one that has been attacked by the legislature in an attempt to try to control cost. In fact, in the last three years the Michigan legislature has initiated 50 major changes in policies to try to control the cost.

We have been recognized as a model for Medicaid cost containment across the country. But even with that major emphasis on cost containment in the Michigan legislature, we have not cut cost at all. What we have done is slow the growth of cost and we feel good about that, but it is still breaking our budget. For example, the national rate of inflation in health care is about 15 percent. In Michigan our Medicaid budget is going up only 12.5 percent, and we attribute much of that to our initiative in cost containment.

First, however, I have a couple of points I want to share, along with these pragmatic political observations, which will help frame my next comments.

Any time you talk about containing costs, you will find yourself caught up by a principle that most of you understand, sometimes referred to as the "shift and the shaft."

The principle is quite simple. You shift responsibility to somebody else and in the process you shaft them by cutting the amount of money

available to do the job. We have seen this principle operating pretty consistently in the last two years, specifically as we look at the states' role in health care. We are being asked by the federal government to pick up more and more of the responsibility and we are being given less and less of the resources to do that. So keep the "shift and the shaft" principle in mind.

Second, we talk about risk. The question to consider is: Who assumes the risk? My concern is that the risk in the program we just heard described is not one that falls to good professional groups -- those able to afford it - but instead falls on the poor and the elderly. This is based on my perspective, as chair of the Joint Committee on Aging in the Michigan legislature and as someone who works on the Welfare budget. I am involved in most of the issues dealing with the poor and I think they, and not the health care industry assume a major part of the risk.

There are other premises that I sometimes see advocated as we get into cost containment. One seems to be based on the assumption that we "ought to shoot the victim." The "shoot the victim" approach generally assumes that the real culprit in this whole system is that irresponsible 'welfare mother', who runs down to the hospital emergency room every Friday night in her Cadillac, and drops her kid off because he has a tempature of 103 degrees. Therefore, in this premise, the way to control the cost is to design a system that will limit the access to care, limit utilization, and require co-payment.

So we look at the person who is out there at the receiving end of it, and we design a system to keep them out or make it harder for them to get in.

Our experience in Michigan has gained national prominence. Our unemployment rate, the lowest in three years, has just dropped to 14.5 percent (460,000 persons) and it is our 46th month of double-digit unemployment. Thirteen percent of our people are on public assistance, and each month, 20,000 people lose their unemployment benefits. Our economic straits have forced us to be more cost conscious.

The fastest-growing part of our welfare budget is aid for the unemployed auto workers. Our case loads have doubled and our costs have gone up almost 200 percent per unit. So utilization is not the problem. It is that the answers being proposed are designed to limit access; and these are based on the methodologies of the Welfare system. So much for the first principle.

The second principle is, "it is someone else's responsibility." This is pretty basic. Doctors will tell you that the problem is the hospital administrator's. Hospital administrators will tell you that it is the doctor's problem. Both of them will agree it is probably the labor costs that have been driven up by nurses' collective bargaining. Blue Cross is not off the hook either. I was a sponsor of legislation to restructure Blue Cross two years ago, in which three major objectives were achieved.

1. Blue Cross was to be restructured -- its organization, how it functioned, and how it afforded compensation.

2. Cost containment was to be built in, adopting a prospective reimbursement system which was part of a model that has been followed in most places.

3. The role of the Commissioner was to be clarified, as to how Blue Cross would invest its money.

Blue Cross was very enthusiastic about containing costs, but was not willing to accept the organizational restructuring. So they took us to court and now, three years later, we still have no cost containment plan.

Everybody wants to assume that there is a problem and everybody wants to assume that something needs to be done, but it is generally someone else who should do it.

A third principle is "we ought to do everything we can to dodge the bullet." Let me give an example of what we found in Michigan. And I am being as critical of the legislators as I am of everybody else.

A couple of years ago we commissioned a study to identify the number of excess hospital beds in Michigan. We identified 7,200 beds in excess of what was needed. If you calculated the cost of the excess beds to the system it came to hundreds of millions of dollars.

We passed a bill through the legislature to "debed" the system--literally to identify these excess beds and "close" them. When the bill finally got through the legislature, the 7,200 beds to be closed were negotiated down to 3,600 beds. That compromise cost us about $42 million a year in health care costs, a good share of which people voted against, because it was part of the Welfare budget.

So, even though we set in law our intention to close these beds, when it came time to actually close them, we all decided that it was someone else's responsibility. That is the principle of "dodging the bullet." Keep that principle in mind.

Prospective Payment

My major concern is that the people most affected by DRGs and at risk are the poor and elderly. In Michigan we worked hard to develop a system of alternative health care and financed it through Title 20, a federal program. Twenty-seven percent of our Medicaid budget goes for long term care. In Indiana, our neighboring state, it is about 50 percent. We have put a lot of money in our alternative network through Title 20, so in Michigan if you are discharged you may have a visiting nurse, a home health care program, a hot lunch provider, chore services, or respite care.

Indiana has not invested it's money in those kinds of services, so when grandmother is released from the hospital, she goes to a nursing home, and the cost, although less than the acute care hospital, is still very high. In Michigan we can send that person home and provide a visiting nurse or other appropriate programs for a fraction of the cost.

The same administration that is offering you DRG's, offered you block grants. This cost Michigan and our Title 20 program a 25 percent shrinkage in our block grants. In Michigan $32 million were taken out of our Title 20 program that provides alternatives that are more humane and cheaper. So unless you are willing to look at the system as a whole keeping in mind all the "principles", and then try to figure out how to handle it, I think we are just going through a charade. These are very tough decisions that have to be faced.

We are schizophrenic about our health care and I include myself. I have three children, and when I take one to the hospital the first thing I say is, "I want you to do everything you can to do whatever is needed to make him well."

They generally do, and then ten days later when the bill for $5,000 comes, I go right through the ceiling because I want the best health care, but cannot afford it. That is another principle. Until we as a society can make up our minds which way we want it, we are going to keep going around and around on this issue.

Are we willing to pay the higher cost, or are we willing to ration health care; and if we do ration health care (let's be honest), who is not going to be served? We must come to a fair resolution on this issue, otherwise I fear that people who cannot pay will not be served.

Connie Curran:

Much of what we are reading in the literature about what will happen with DRG's, indicates nursing, if it chooses to take advantage of the opportunity, can expand its role, particularly in home health care, clinics, and other alternative health care programs. One question that this largely nurse audience has to face of course, particularly from some one representing Blue Cross and Blue Shield is: What are you going to do about reimbursing nurses for their services?

Marianne Udow - Blue Cross & Blue Shield of Michigan:

I would like to comment first on what we see as the impact of DRGs and then project how this might affect nurses from Blue Cross and Blue Shield's perspective.

Clearly one of the major concerns of Blue Cross and Blue Shield and other private payers, is the built-in incentive that the prospective payment system has for hospitals to treat patients that are not Medicare patients, and how these patients will be treated. One of the major concerns

is what hospitals will do to reduce the length of stay of Medicare patients and whether this will be done appropriately or perhaps inappropriately. There is also a concern hospitals will try to reduce the admissions of Medicare patients due to concern about low rates of reimbursement. As a result, they may make up for those lower occupancy rates by admitting Blue Cross and Blue Shield of Michigan patients, other private payer patients, or Medicaid patients (which might drain the reserves of third party payers.)

As a result there is considerable reaction on the part of Blue Cross plans around the country as well as other private payers. Whether the response will be pro-active or reactive in relation to nursing's role, the outcome is not likely to be positive for nursing. But this is yet to be seen.

There is no question in my mind that Blue Cross and Blue Shield plans will be tightening up their procedures for utilization review to assure that those admitted to hospitals are not there simply to fill beds that formerly were filled by Medicare patients. Also, they will be looking at alternative delivery systems and perhaps this is where the role for nursing might be expanded. I think we will see a lot of growth in agencies such as preferred provider organizations as well as growth in terms of the 'continuum' of care.

I think also you may see some private insurers turn to a DRG payment system simply because of concerns about cost shifts they will incur if they do not adopt the system. I think that would be a shame in many ways, particularly in a state such as Michigan. In Michigan we have a prospective reimbursement system for Blue Cross and Blue Shield (five years) and for Medicaid (three years). It has been a very efficient system and I think that theoretically, conceptually, and in terms of quality of care, it is probably a better system than the DRG system. It is a system, however, that we may not be able to afford to maintain, given the changes made in Medicare. We have a lot of concerns about its future because of the pressures for hospitals and others to follow along with the Medicare plan.

As a result, we are going to see a lot of reaction and changes on the part of the private payer networks throughout the country. In terms of the specific question about the continuum of care and the changing role of nursing; frankly, I do not see many changes, particularly in Michigan.

A frequent question is whether or not we will begin to make direct reimbursement to nurses for their services. As you know, reimbursement is made either through the hospital or through the physician. There is no direct reimbursement in this state although some states reimburse for some specialty groups, like nurse anesthetists and nurse midwives. I see more interest in that regard in Michigan. In terms of general nursing services, however I see little likelihood for change at present.

I think that we will be far more concerned with reducing the level of cost to the extent that we can. I think that for the time being we are going to be in a reactive mode. We are not going to see a lot of proactive involvement in alternative nursing delivery structures, although there certainly will be a review of a lot of alternative delivery stuctures to the hospital system.

As Representative Hollister points out, Michigan already has quite a continuum of care for which we do reimburse, and that's not only true for Medicaid, but also for Blue Cross and Blue Shield, where we cover home health care and skilled nursing facilities. Of course, we probably will be covering hospice care services, and, in fact, are looking at an intermediate level of care between the skilled nursing facility and the acute care hospital.

Connie Curran

I want to explore that just a little further with you, Ms. Udow. Several studies, for example the Burlington studies ten years ago, and many done more recently, have looked at nurse practitioners and they have found the quality of care to be equal to or better than that of medical practitioners, and certainly much less costly for patients with chronic illness, or people who are generally well. What then is the rationale for not having direct reimbursement to nurse practitioners?

Response by Ms. Udow:

I very much agree with you. There is no question in our minds about the quality of care issues, nor is there question about the per unit cost of those services.

The concern that we have, particularly in a state like ours where there is a tremendous health care cost burden, is the total system cost. Our concern is that those services do not act as substitutes for the higher cost physician services, but end up being an add-on cost to the physicians' services. If we could develop a structure or become comfortable with the fact that they really are acting as substitutes, that we are not simply increasing the total number of visits out there, and that we are substituting a lower cost form of care for a higher cost, then there would be no hesitation. That is why there is a lot of potential for direct reimbursement of nurse midwives, because there is less possibility there, or less likelihood of add-ons to services. We do not think women will go out and get pregnant because we are going to reimburse nurse midwives. But with respect to the nurse practitioners, there is not that level of confidence.

Dr. Curran:

Does your data indicate that the public or the patient-client population would use it as an add-on rather than as a replacement?

Ms. Udow:

That's what the indications are.

Dr. Curran:

Dr. Dalston, how do you see DRG's affecting hospitalization, hospital nursing services, and some of the things Dr. Davis talked about in terms of specialty hospitals where profit is the major motive. How do you see this whole movement impacting a large university medical center such as the one for which you are responsible?

Jeptha Dalston:

I am delighted to be here with MAIN to discuss this subject. If someone had told me 20 years ago that I would be in a room in Detroit with the Director of the Health Care Finance Administration who is a nurse, talking to a room filled with nurses, on the topic of health care cost containment, I would have thought it impossible!

I take this to be a very productive development that's occuring here. For a long time it has seemed to me that we should be doing what we are doing right now: coming together to consider how we can best serve the public and our patients in all dimensions of the service. In the 1960's, the doctors came into my office waving their arms in my face, saying "we need this, and this and this." I would say, "But doctor, consider the cost." The response was usually, "It's your job to get the money. My job is to take care of the patients." Our directors of nursing and head nurses were of a similiar mind set.

The point is that it is now time for us to come together. The prospective payment system (PPS) in the form of national policy is forcing a union which should have happened a long time ago. Dr. Davis presented a very lucid and candid description of the PPS. I think the interest of this group of nurses is quite germaine. I appreciate the planning of your program committee to concentrate on this area because it seems to some of us that we are on the threshhold of very far-reaching and fundamental changes that will have quite a wrenching effect: it will be turbulent and difficult.

We have passed through this period of public policy change and we are beginning to assemble the ingredients to achieve our goals. I do not entirely embrace the prospective payment system. Dr. Davis would not believe me if I said that I did because we have talked about this many times. On the other hand, I do embrace the fundamental objective which is to get the incentives to reduce costs in the right place. She emphasized it.

There are however, aspects of it which are very worrisome. I will run through a few of them. I will not make a contrary case to the system for I believe we are beyond that. It is in place and it is with us. We are in

an implementation mode and it serves little purpose now to rail against the legislation itself. However, it serves a very important purpose to consider its shortcomings, so I will mention a few, and also respond to the questions that Dr. Curran has asked me.

1. We are in uncharted waters. We do not know what effect that implementation of the DRG-based prospective payment system will have on a national scale. It is untried.

2. We are very worried about the plan's weaknesses, having to do with the acuity of illness aspects, and whether or not we can achieve equity. More than equity, however, we worry whether or not we can put the resources in the right places to provide the right kinds of care to the people who most need it.

It is likely to be a very complicated system. Dr. Davis described one of the criteria for adoption, that the system bring simplicity to administration. I know that she is working very hard to do this and so are we, but I believe that it will nevertheless be cumbersome and complicated. The educational costs are very worrisome to those of us deeply engaged in educational programs across the spectrum of health care professionals. The ultimate responsibility, accountability, and assignment for provision of the cost of nursing education, medical education, other types of education will remain a floating factor that will not settle down.

Quality of care also is very much an issue for reasons you all well appreciate. We are concerned about getting people out of the facilities, and unlike the past, we will be highly motivated to substantially reduce length of stay. Where do they go? What happens to them? What do they do? We are concerned about that, we are concerned about access to care and what the DRG-based system would bring about in this regard.

The PSRO program utilization reviews have been somewhat successful, but insufficient, to assure quality. The access question emerges in financing of indigent care. The poor people in our society cannot pay and thus the possibility exists for two levels of care. Personally, I think we always had two levels of care.

With regard to Dr. Curran's question about academic medical centers I must say we are terribly concerned about our capability of accomplishing our mission in the future. As we enter this brave new era of competition and payment based on actual cost, we realize we are not models of efficiency; there is not very much efficient about the educational process. Educators seem to have two alternatives. One is to recast ourselves in an entirely different operating mode in order to become competitive, but at the same time fail to accomplish much of our present mission. Secondly, we could seek the shelter of public policy at both the state and national level to appeal to policymakers and help them realize our mission is needed, desired, and valued by society. We should appeal to the decision-makers and ask for some favored status under these various payment systems.

Both alternatives are fraught with difficulty; and the possibility, even probability is that we will not succeed. We are entering a pre-Flexnerian era, an era that brought education of the medical profession into the mainstream of university life. Presently, there are many forces trying to drive it out of university life.

In conclusion I can say: yes, we are concerned about product differentiation. Are we going to divide up the market pie with everybody specializing in what they can do best and not doing the rest? Yes, that appears to be happening. New York University has initiated a policy of doing more open-heart surgery and moving away from primary and secondary care. That is likely to happen. We are worried about that at the University of Michigan because we believe that education requires exposure to all aspects of practice. If we engage in that kind of product differentiation in a price competitive system, we will have to limit educational exposure.

Coming back to my main point, however, we are part of a free society and we must recognize the objectives of society. We must somehow find a way to fit into society and it appears the prospective payment system is motivating and uniting us.

Representative Hollister, I think you are right. I have long since recognized that the public is schizophrenic; people want us to contain cost, but when it comes to health care of their loved ones, they want the best, whatever the cost. This undermines my argument to the doctors when I tell them "we must economize!" They say to me, "Nothing is too good for my patients." Of course, the patients and their families tend to agree with the doctor.

It is time for us to bring the issue to the public and not try to deal with it by ourselves. These issues are upon us, and we must reach some rational ground.

Connie Curran:

I have one other question to ask Dr. Dalston. Part of the role of the academic medical center has been to develop new and better ways of doing things. That is one of the characteristics for which this country has become well known. What will DRGs do in terms of our staying at the forefront of technology and humane treatment of all patients no matter what their socio-economic status?

Dr. Dalston:

Academic medical centers have never been noted for humanity of their care. So allow me just to shove that one aside. The science of our care is on target, but humanity is something we struggle with continually. We are, however, very much at risk. Dr. Davis wants us to be at risk, we are at risk. I believe we ought to be at risk, but it is also important that we evolve through these stages and not become abusive of national resources and the four or five dozen academic medical centers that produce those technological and scientific miracles.

Policies for Nurses in Advanced Practice in a Time of Physician Surplus

by Martha Bergsten, MA, MPP
Office of Health & Medical Affairs
Department of Management & Budget
State of Michigan

Nursing leaders are advocating direct reimbursement for nurses in advanced practice. This would mean that nurse practitioners, clinicians, midwives, and anesthetists could send bills to insurance companies such as Medicaid, Medicare, Blue Cross and Blue Shield and be paid. The purpose of this paper is to look at the ramifications of such a change and to explain some of the dilemmas it presents to policy decision makers. It is important for nurses to understand and recognize these dilemmas because nurses need to, and will want to, participate in resolving them.

If nurses in advanced practice are able to be paid for their services without working for a particular physician or hospital, then this would no doubt facilitate an increase in the number of nurses in advanced practice. I would like to discuss the ramifications of moving to a health care system where nurses in advanced practice play a larger role and to organize the discussion around four broad, desirable characteristics of a health care system: quality of care, accessibility of care, consumers' ability to choose different types of care, and cost of care. The fourth characteristic, cost, presents perhaps the most serious dilemma.

Over the past decade and a half, as nurse practitioners have evolved, there have been numerous studies evaluating various aspects of the quality of their practice, as well as a number of studies on nurse midwifery practice. The generalization emerges that the quality of health care rendered by these nurses is typically as good as--or better than-physicians'. (Everyone recognizes that physicians can handle a much greater variety of medical situations, but the studies are designed to compare episodes that both types of providers can handle well.)

Sox (1979) reviewed 21 different studies comparing nurse practitioners and other nonphysician health care providers with physicians and concluded there were "no systematic differences in the outcome of illness in patients." Some of the studies, however, detected superior outcomes among patients managed by nurse practitioners. For example, a group of hypertensive patients achieved greater reduction of their diastolic blood pressures when treated by nurse practitioners as compared to physicians, (Runyan, 1975). Many studies of nurse midwifery practices show improved outcomes compared with physicians' practices, (Fagin, 1982).

Nurses in advanced practice represent an asset to the quality of our health care system. In the future we want to maintain this high quality. New specific quality assurance mechanisms will need to be designed; and alternatives to physician supervision should be developed.

A second characteristic by which we assess health care systems is access. Conceptually, access embraces geographic, financial, cultural, and social aspects. To date the practices of advanced nurses have moderately improved all types of access. Traditionally, the best known midwifery services in the U.S. have served very poor people in the mountains of Kentucky, the desert of California, Indian reservations, or ghettos of big cities. With respect to geographic availability, a 1976 study of midwives found 10 percent of all practicing midwives in counties with less than 10,000 people, (American College of Nurse Midwives, 1978). These same counties' share of physicians in proportion to population is much less than 10 percent. A large proportion of all nurse anesthetists work in smaller rural hospitals which cannot attract physician anesthesiologists. Nurse practitioners in ambulatory care are somewhat more likely than physicians to work in rural underserved areas.

Therefore, so far, nurses in advanced practice have tended to practice, more so than physicians, in less served geographic areas and among less served patients. This is partially due to various public policies. For example, publicly subsidized community health centers, which are targeted toward underserved rural and urban areas, and public health clinics, tend to hire more nonphysician personnel along with their physician personnel; this allows them to serve more people at lower unit cost. Some advanced nursing students receive financial aid while in school in return for practice in an underserved location once they graduate. California decentralized several training programs in order to have almost all graduates locate in less served areas, and so far their strategy appears to be working. The point is that either these or other policies and incentives will need to be in place in the future in order to enhance the ability of nurses in advanced practice to increase access as much as they are already increasing it today.

A third characteristic of the health care system is the extent of consumer choice. This is a more blurred area--partly because the style, content of practice, and personalities of individual physicians and advanced practice nurses can differ almost as much within each profession as across professions. In any case, nurses believe that they as a group are different in important ways, and that some patients will continue to have a preference for a nurse.

If direct reimbursement leads to an increase in the number of advanced nurse providers, then consumers' opportunities to select one will be increased. Since both physicians and nurses offer high quality care, enlarging consumers' range of choice with respect to other aspects of care is a dividend. A prominent example is that of midwifery. Midwives' practices--on the average--are sufficiently different from physicians' practices that some pregnant women and their families prefer the midwife type of practice. For example, they may want to have a midwife in close attendance during the last several hours of labor. Other patients will prefer physicians.

Thus far, I have touched on quality of care, access to care, and range of consumer choice. Now I have arrived at the characteristic I want to discuss most thoroughly: cost. First, I want to talk about cost-effectiveness studies of nurses in advanced practice, and then go on to the cost analyses for the larger health care system.

The nursing profession is arguing for direct reimbursement to nurses in advanced practice because this will enable more to practice and because each such nurse in practice helps to reduce health care costs. In fact a number of studies have measured the cost of care by advanced practice nurses and the cost of comparable care by physicians. Usually, the nurses have turned out to be the more cost-effective providers. Keeping in mind that these studies look only at the direct effects on the costs of one office, or clinic, or payer involved; the studies I mention should not be extrapolated to the health care system as a whole without further analysis. We must also keep in mind that under the present system it is difficult to measure the true costs associated with nurses' practices because some inappropriate physician and hospital overhead charges almost always remain in what are taken to be nurse costs.

Two cost studies of nurse midwifery practice found a lower cost per birth compared with local physician care. One study in Utah found a saving of $114 per birth (Cherry and Foster, 1982). Another in New York City Medicaid recipients found a saving of $855 to $1,840 per birth, (Lubic, 1981). The reasons for the large discrepancy between the two results probably are related to pricing practices of the local units involved and to other local differences. Reasons nurse midwives reduce costs include shorter hospital stays of their patients, lower prematurity rates, lower caesarian section rates, less intensive use of certain hospital equipment, drugs, and anesthesia, and lower earnings by nurse midwives themselves. There are some additional services associated with midwife practice that lessen the cost reduction: home visits (following short hospital stays), and more midwife time per labor and delivery (which, in turn, means there may be less time spent by regular nursing personnel). The net result, however, has consistently been cost reduction.

There are a large number of examples of nurse practitioners' cost savings and I will cite several briefly from different settings.

- In treating ear infection and sore throat episodes in an HMO pediatric department, costs were 20 percent lower when a nurse practitioner was the initial provider. (Salkever, 1982)

- The cost of well-child care in a large group practice was reduced by having pediatric nurse practitioners. (Burnip, et al, 1976)

- Using nurse practitoners to staff the clinic at a center for retarded adults was found to be more cost effective than having an on-call physician make visits to the center and see patients in his office. (Hauri, 1979)

- A small company sent its RN to a nurse pratitioner program. After her return, they estimated their net savings at $3,600 per month ($43,000/year). (Caward, 1980)

- A school district saved $19,000 when it added a school nurse practitioner as a consultant to its regular school nurses, eliminated the school physician position, and purchased medical services on an as-needed basis. (Sobolewski, 1981)

Record (1980) performed an extensive literature survey and cost analysis of both nurse practitioner and physician assistant studies. She merged the results for the two types of nonphysician providers and estimated that on the average one nurse practitioner or PA can substitute for 63 percent of a physician at 38 percent of the physician's cost yielding a cost saving of 40 percent. This calculation considers employment costs only; it is solely from the perspective of the employing physician or agency.

From society's perspective, training costs are an additional factor upon which to compare professions, and the lower training costs for nurse practitioners and PAs revised the estimated cost reduction from 40 percent to almost 50 percent, (Record, et al., 1980). Another pair of researchers developed a model that predicted a 23 percent cost saving. So although cost saving estimates vary, they are almost always in the direction of cost savings.

What the literature shows is that in many instances nurse practitioners, midwives, and anesthetists have been very cost-effective providers. Therefore, they have the potential to continue to be cost-effective providers in the future. But it is also possible for it to turn out differently. Two examples can illustrate this. If direct reimbursement of nurses were to result in more nurses being paid on a fee-for-service basis than presently, and if these nurses' annual earnings were to increase relative to physicians, then this in turn would lower the cost effectiveness of nurses relative to physicians. Another example is if the average length of training of these nurses increases, then their education costs may increase relative to physicians, and this too would lower the relative cost-effectiveness of these nurses. The cost effectiveness of all types of nurses in advanced practice depends on how much lower these nurses' earnings and training costs are compared with physicians', how efficiently these nurses carry out their patient visits, how efficiently these nurses are used if they work in a clinic or group practice organization, and to what extent they motivate preventive and cost-effective behavior on the part of their patients.

We have examined the direct effects of using nurses in advanced practice and found that the direct effect is to lower the cost of producing health care. However, the result of these unit cost reductions has not always been to lower prices to the consumer. In the fee-for-service system,

in many instances, physicians have in effect realized a profit by hiring an advanced practice nurse. In the HMO sector, these organizations have passed the savings on to consumers, or offered additional services to their members. Public clinics have either offered more services than otherwise or kept their budgets lower than otherwise.

Having examined the costs from an individual or microanalytic perspective, aggregate health care costs from a system-wide perspective can now be examined. In essence, if society starts spending more on nurse services, and if it still spends just as much on physician and hospital services, then the total bill will be more, not less.

One helpful way to categorize advanced practice nurses' services for analysis is to assume that some of their services will substitute for services that would otherwise be rendered by a physician, and to assume that other of their services will be new additions to the health care system.

An apt example of substitutive services may be children's ear infections: If the parent had not taken the child to a place to be seen by a nurse practitioner, then the parent probably would have taken the child to a physician. The result is that the nurse practitioner performs one "ear infection" visit and some physician performs one less "ear infection" visit. The key question is what is going to happen to this "extra" time the physician has. If this hypothetical physician is a busy one, no doubt some other patient visit will be scheduled. If not, the physician may spend more minutes with other patients, or do some extra reading to keep up in the field, or even take more leisure time.

If the reaction of physicians, to movement of their "business" to nonphysicians, is to continue to engage in just as many patient care activities, then the community as a whole will be purchasing "new" nursing services and just as many physician services, and therefore total expenditures for all services will probably increase. However, to the extent physicians take time off, engage in nonpatient care professional activities, or lengthen other patient visits (without charging more for these longer visits), then substituting nurse services for physician services will either keep the community's total expenditures on health care the same--if the nurses substituted services are priced the same as the physician's,--or this substitution will lower the community's total expenditures on health care if the nurses' services are cheaper.

Since the physician community is apt to respond partially in all of these ways, the net result on total expenditures is not known. However, under the fee-for-service third-party reimbursement system as presently constituted, nurses' fees are not apt to be too much lower than physicians; and physicians are not subject to very much competitive pressure. Therefore, the net result of substitutive nursing care could easily be to increase total health care expenditures. The net result on the health status of the community, of all the possible changes above, probably depends pri-

marily on how critical the "new" physician work is to the health status of the population. My intuition is that it is marginal at best.

This completes the analysis of substitutive services, and we proceed next to services rendered by nurses in advanced practice from a system-wide perspective, that are additions to the system. Either they may be visits to a nurse that would not have otherwise occurred with any other provider, or they may be complementary services that a nurse renders during a substitutive visit that, had the patient visited a physician, would not have been provided. The first type would ordinarily be charged for; the second type may or may not be. The latter may not be charged for because some of the services provided by advanced practice nurses, such as more thorough nutritional or social counseling, are not separately reimbursable procedures in our fee-for-service system. In any case, to the extent additive services are charged for, the community's total health care expenditures increase. Therefore, the key question with respect to additive services is how much is the community's health status improved as a result of these additional expenditures.

So far the analysis of the system-wide effects of more advanced nurse practices has been primarily static in its approach; it has looked at effects at one point in time. Another aspect of these nurses' practices is the extent to which they, more than physicians', are able to prevent future complications or illnesses which could necessitate future visits or hospitalizations. Again, the direct saving is diminished to the extent some of the extra physician time gained and some of the extra hospital bed days gained tend to be taken up by other patient visits and other hospitalization days.

Health care cost containment--the central theme of this conference--has been at the top of the health care policy agenda for the last several years. Let us review the salient features of today's health care system. First, there is surplus hospital capacity and hospitals try to maintain or increase occupancy via any number of ways. Secondly, we are on the threshold of an age of surplus physician capacity. In Michigan, for example, medical school capacity has doubled and the physician-to-population ratio has grown from 144 per 100,000 in 1972 to 197 per 100,000 in 1983; it is projected to increase to 230 per 100,000 by 1990, (State of Michigan, September 1983). There is no way to stop it, because all of the 1990 physician supply is either practicing or already in medical school. Thirdly, the "need" for health care is relative rather than absolute; it is capable of a great deal of elasticity. Finally, third-party reimbursement systems are so arranged that there is no fixed budget for health care. Total spending on health care has been consuming more and more of society's resources each year. In Michigan personal health expenditures have risen from 6.5 percent of personal income in 1966 to 9.4 percent in 1976 to 10.8 percent in 1981, (State of Michigan, February 1983).

Although there are positive aspects of medical care insurance and fee-for-service payment systems, their combination has allowed fees to increase

more rapidly than they would otherwise, and it has allowed unnecessary utilization to increase more rapidly than it would have otherwise.

Experience with financing and delivery systems has shown that where one or the other party to decisions to consume health care shares in the financial risks, hospital utilization rates are much lower and health care costs are contained. Examples of these other arrangements are health maintenance organizations, independent practice associations and preferred provider organizations. These systems put providers under some financial risk for excess utilization, but as yet they are just a small piece of the health care system. By far the largest sector is straight fee-for-service and reimbursement by a third party-where the financial incentives run in the opposite direction, that is, toward excess utilization and higher fees.

In wanting to be more autonomous in practice, nurses are seeking to join this fee-for-service reimbursement system. Therefore, despite the potential that nurses in advanced practice may offer to lower total health care costs in the long run, in the immediate future, ironically they will have a tendency to increase total health care costs. This is because they want to join the fee-for-service reimbursement system where price and utilization controls are weak and because these advanced practice nurses will add to excess patient care capacity. The critical question decision-makers now face is how to begin work toward that desirable future system, where advanced practice nurses play a much greater role, without exacerbating costs too much in the next few years. At what pace should reimbursement policies for nonphysicians change and how should they change so costs are minimized and quality, access, and choice are maximized.

In seeking to alter reimbursement policies so that nurses in advanced practice can increase services in ways which will contribute the most to improved health and the least to increases in total health care expenditures, there are a variety of strategies that may help. These will not be presented as full-blown, detailed proposals, but rather as ideas that seem worth exploring.

One idea is to open up direct reimbursement only to nurses who practice in certain geographic areas such as shortage areas, or only to nurses associated with certain projects. This would serve to limit the size of the newly reimbursed group and it would direct additional personnel to places where they are most needed.

A different idea pertains to fee levels. Third parties usually establish an upper limit on how much they will pay a particular provider for a particular service. For particular procedures which can be performed equally well by both physicians and nurses, third parties could lower the maximum fee and reimburse both physician and nurses at this lower rate. A major problem with this lower fee idea--apart from political opposition by physicians and nurses--is that control is exercised over the amount of the fees only; overall utilization remains uncontrolled.

For a third possibility, consider a category of nurse in advanced practice that has not been cited so far-certified registered nurse anesthetists. As diagnosis related groups (DRGs) are implemented, and if physicians' work in hospitals begins to come under the DRG system, then almost all work of anesthesiologists and nurse anesthetists will come under DRGs. Then total expenditures on anesthesia care will be controlled, provided surgery rates do not increase. DRGs are interesting to all of nursing for many reasons but in particular to nurses in advanced practice because the system could work to their advantage. To the extent payment systems become tied to diagnosis, health care agencies are likely to substitute nurses for physicians in order to enhance their profitability.

Another hope for cost containment is to increase the number of providers working in health maintenance organizations, independent practice associations, preferred provider arrangements, or in some type of risk sharing arrangement. Those entities relying more heavily on nurses in advanced practice should offer more competitive premiums or prices and, in this way, nurses' contribution to competitive pressures may equal or exceed their contribution to expenditure pressures.

Midwifery practice suggests another strategy. Midwives' patients tend to have shorter stays in hospitals. Unless obstetrical beds, nursery beds, and indeed total hospital beds shrink, the potential savings to society are not apt to be fully realized. However, to the extent certificate of need decisions can incorporate these decreases in projected OB and newborn bed utilization, then savings to society can be fully realized.

The strategies above may not sufficiently control total costs. Therefore, ideas about more direct controls over total costs are interesting. These represent major changes and, therefore, are all the more difficult to get adopted. Various types of ceilings, "caps," or expenditure limitations could be devised. Take OB services as an example. All third parties could jointly establish a statewide fixed budget for the upcoming year for all obstetrical services, including expenditures for physicians, midwives, other personnel and for all obstetrical facility charges. The number of births in a given year is predictable within a narrow range. Using some average total expenditure per birth, the target budgeted amount can be set. Each OB provider could submit bills as services were rendered and receive reimbursement, but the initial payment would be less than the full billed amount--say 80 percent. After a year, if bed utilization, caesarian section, etc. were such that the total of all bills submitted did not exceed the budgeted amount, then everyone would receive the remaining 20 percent. If, on the other hand, total charges exceeded the budget by 5 percent, then everyone would only receive another 15 percent of all their charges (for a total of 95 percent).

Other groups of expenditures that could be capped in a similar way are all anesthesia services, even all hospital services, and eventually perhaps all health care services. Also total capital expenditures by hospitals

could be held to meet a fixed budget amount if state certificate of need processes were modified.

In conclusion, I hope I have made clear the dilemma I see policy makers facing. Nurses seek to gain entry into the fee-for-service system and this is the very system that is giving us lots of problems: it exercises weak control over fee levels and even less control over utilization. If we add direct reimbursement of nurses to our existing fee-for-service system, in these times of growing physician surplus, it appears we will exacerbate our cost problem rather than mitigate it. The gains in access, quality, and range of consumer choice may or may not outweigh the expenditure increases.

Major reforms in our whole third party reimbursement system are a desirable prior step before moving to direct reimbursement for nurses.

References

American College of Nurse-midwives. Nurse Midwifery in the United States 1976-77, 18, 1978.

Burnip, R.; Ericksen, R.; Barr, G.D.; Shinefield, H.; and Schoen, E.J. Well-child care by pediatric nurse practitioners in a large group practice: A controlled study in 1,152 preschool children. American Journal of Disabled Children 130, 1976, pp. 51-55.

Caward, J.A. Economics of the N.P. role in an industrial setting. Nurse Practitioner, Nov.-Dec. 1981, p. 17.

Cherry, J. and Foster, J.C. Comparison of hospital charges generated by certified nurse-midwives' and physicians' clients. Journal of Nurse-Midwifery 27, (1), Jan.-Feb. 1982, pp. 7-11.

Fagin, C.M. Nursing as an alternative to high-cost care. American Journal of Nursing, 82 (1), pp. 56-60.

Hauri, C.M. et. al. Cost effective primary care. Nurse Practitioner 4, Sept.-Oct. 1979, p. 54.

Lubic, R. In Health policy and nursing practice. ed. by L. Aiken. New York: McGraw-Hill Book Co., 1981, pp. 106-107.

Record, J.C.; McCally, M.; Schweitzer, S.O.; Blomquist, R.M.; and Berger, B.D. New health professions after a decade and a half: Delegation, productivity, and cost in primary care. Journal of Health Politics, Policy, and Law 5, (3), Fall 1980, pp. 470-497.

Runyan, J.W. Jr. The Memphis chronic disease program: Comparisons in outcome and the nurse's extended role. Journal of the American Medical Association 23, Jan. 20, 1975, pp. 264-267.

Salkever, David; Skinner, E.; Steinwachs, D.M.; and Katz, H. Episode-based efficiency comparisons for physicians and nurse practitioners. Medical Care, 20, Feb. 1982, pp. 143-153.

Schneider, D.P.; and Foley, W.J. A system analysis of the impact of physician extenders on medical cost and manpower requirements. Medical Care, 15, (4), April 1977, pp. 277-297.

Sobolewski, S.D. Cost-effective school nurse practitioner services. The Journal of School Health, Nov. 1981, pp. 585-587.

Sox, H.C. Quality of patient care by nurse practitioners and physician's assistants: A ten-year perspective. Annals of Internal Medicine. 9, Sept. 1979, pp. 459-468.

State of Michigan, Department of Management and Budget, Office of Health and Medical Affairs. Personal health care expenditures, 1966-1981. Michigan Health Care Cost Reviews No. 1, Feb. 1983, p. 15.

State of Michigan, Statewide Health Coordinating Council. Michigan State Health Plan 1983-1987 (Vol. III). Health Personnel, Sept. 1983, p. 27

Results Oriented Programming: Cost Containment Through Staff Development

by Bonnie K. Hagerty, RN, MS

Health care costs continue to rise. As a result, third party and governing agency payers are becoming reluctant to pay for the increased costs, consumers are becoming more informed of issues, and health care providers are facing the need to be more accountable for delivery of cost effective services. The concern about increasing health care costs have demanded that nursing investigate all avenues for cost saving, yet maintain effective health care delivery. This development demanded that nursing review its care delivery operations.

One avenue for containing costs is through nursing staff development. Usually we associate this with consideration of cheaper ways to present the programming. Yet, we also need to scrutinize the relationships among staff development programming, nursing operations, care delivery, and costs. The questions go beyond, "How do we sponsor staff development more cheaply and effectively?" We must ask, "How can we use nursing staff development programming to impact health care costs?"

Objectives for this presentation are learner-oriented. Through this presentation you will be able to: describe Deniston's model of evaluation; discuss the relationship of Deniston's model to staff development programming; explore the results-oriented programming model; and initiate one component of results oriented programming in your institution.

The University of Michigan Hospitals have begun to address the issue of cost containment of nursing operations and staff development programming more closely. The model that we have used to look at this issue is Deniston's work on evaluation, (1968, 1970) which provides a framework for results oriented programming.

Deniston's Evaluation Model

A model for evaluating public health programs was developed by Deniston and Rosenstock (1970), in response to the growing demand for approved evaluation methodology for health programs. It presents concepts that systematically outline a logical approach to evaluating programs.

Program: an organized series of activities related to achievement of specified outcomes (objectives) through expenditure of resources.

Program Appropriateness: agreement that the program is needed and that the objectives are achieved through desirable, value-based decisions regarding need and priority.

Program Adequacy: the extent to which the problem has been prevented or eliminated by the program.

Program Effectiveness: the extent to which attainment of objectives has occurred.

Program Efficiency: the cost in resources in obtaining program objectives.

Side Effects: the unintentional or unanticipated effects of a program. These can be desirable or undesirable.

At first, these concepts sound basic, but with further analysis, they are quite complex. Deniston, for example, goes on to develop a concept of program efficiency in a quantitative manner, constructing formulas for a degree or achievement of program objectives as compared to various costs. The model is actually quantitatively focused and requires the user to quantify concepts involved in programming. For example, "reviewing program adequacy" forces the evaluator to determine the degree to which a problem has been eliminated or addressed.

In staff development progamming, for nursing and health care in general, the concepts above have not really been utilized. Program activities and resources have been addressed, but program results have not. We have focused on structure and process, not outcomes. We have been presumptuous in believing that activities and resources determine results. Our "bigger and more is better" philosophy has not addressed quality or outcomes.

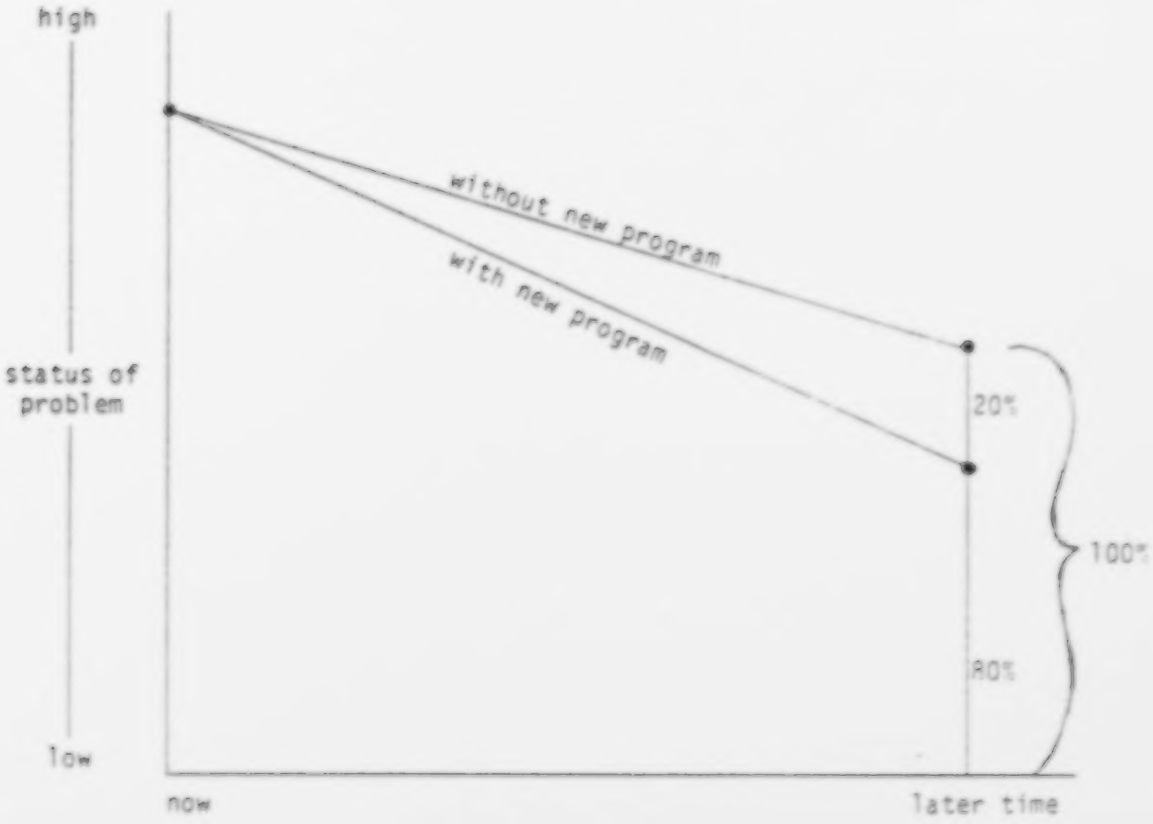
It is common for staff development/human resources development departments to make evaluative statements about their successes. These statements include, "We have given 80 programs in 6 months, 625 employees attended, we had to hire 2 new educators, and the learners liked the programs as evidenced by their very satisfied responses on the program evaluations." Questions still remain: 1) What were the intended effects of these programs? 2) What results were achieved for the patients, employees, and organizations as a result of these programs? 3) Were they done most effectively and efficiently?

Deniston's Model in Staff Development

Deniston's evaluation model provides a framework for staff educators to consider in planning and evaluating staff development programs. The components of the model force us to consider perspectives that are often overlooked. These perspectives are directly related not only to the cost and effectiveness of the planned programs, but also to the ability of staff development programs to contain health care costs.

First, Deniston's model emphasizes results rather than assessment, activity, and resources. Specifically, programs are planned in response to an identified need. This need is not a simple statement by an individual or group that a program would be beneficial, helpful, or interesting. Rather, the need should be researched and the intended outcomes identified in quantifiable and behavioral terms. This assessment process is depicted

Figure 1. Estimating Program Adequacy



graphically by Deniston. He presents a hypothetical program and the predicted outcomes at a later evaluation point. He also attempts to determine what the status of the problem would be without the program. (Figure 1).

This aspect is frequently ignored by staff developers and managers. However, the determination of specified results provides the manager and educator with data necessary to make informed decisions about program appropriateness. Decisions are made based on results rather than process. The intended effects as well as the side effects should be identified.

Second, educators and managers need to question how a decision is made to sponsor a staff development activity. Who decides its importance and priority? Who analyzes its relevance to institutional objectives? Who determines program appropriateness?

The third issue to consider involves the actual appropriateness of the program. Will proposed Program A eliminate or address 100 percent of Problem B? For example, if new staff nurses are being oriented inadequately based on supervisor reports, is a new, longer, or improved orientation needed? Perhaps so, but it may address only 20 percent of the problem. Possibly, Head Nurses are not allowing new nurses to attend all orientation seminars due to a staffing shortage and that is 80 percent of the problem. If so, is it worth investing resources in a new orientation program?

Fourth, we need to address program effectiveness. To what extent were the objectives of the program met? This is usually done in a simplistic manner without consideration for evaluation methodology. Yet, program effectiveness needs to be determined to provide accountability for the expenditure of resources.

Finally, resource expenditures, or program efficiency, is usually not addressed adequately. We hedge on this point by stating that the full determination of cost, direct and indirect, is difficult to achieve; and the relationship of cost to attainment of the objectives is almost impossible to determine. Yet both Del Bueno (1980) and Deniston (1970) have addressed this in the literature. We can identify cost and we can quantify effects. For example, a program on organic mental disorders recently cost $120 for educational planning and delivery time; $600 based on 10 people attending for 5 hours at an average of $12.00 per person; and $30.00 in materials. It is possible for us to look at the savings gained due to shortened length of stay of patients as a result of this program.

If the typical patient eventually diagnosed with an organic mental disorder remains in the hospital 10 days, we can then look at the average diagnosis time for a patient whose nursing staff has had the program on assessing organic mental disorders and see if the length of stay has been shortened. If the length of stay becomes 8 days, each patient whose nursing staff were influenced by the program is discharged 2 days earlier. At a $300 charge per day to the patient, the patient may save health care

costs of $600. This, of course, is a hypothetical example. However, it is possible to determine the actual cost benefit of a staff development program on the basis of cost.

Results Oriented Programming

The issue portrayed by Deniston's model led to further analysis of the relationship between the model's concepts, my own ideas about staff development, and cost effectiveness. Six aspects were identified as major components of a results oriented programming framework. I call the framework Results Oriented Programming because, quite simply, it focuses on results. It addresses employee, patient, and organizational needs by identifying outcomes that are desired or required and fosters achievement of those outcomes. The six components required for results oriented programming are as follows:

- Staff development educators as program managers vs. program planners,
- Improved methodologies for needs assessment,
- Improved, organizational, practice-related performance objectives,
- Varied, results-oriented learning activities,
- Clinical and administrative supervision, and
- Improved evaluation methodologies.

In the following section, each of these aspects will be developed more fully.

Staff Development Educators as Program Managers

Staff development is a staff function, assigned by administration, responsible for developing educational programs for nursing staff. Organizationally, staff development should flow from the goals and objectives of the institution and the decisions made by administration. Certainly, however, there is a two way flow of ideas when the educators relate their perceptions of staff needs and recommend solutions to managers. The ultimate responsibility for staff development decisions lies with the managers. Administrators should assess the needs of the organization and its employees based on input from staff development, and determine the appropriateness of spending dollars for various programs.

However, not many administrators have detailed knowledge about education in general, the learning needs of their employees, or the educational options available. Thus, it becomes incumbent on the staff development educator to assume a more active role in program management: conducting high quality needs assessments, determining needs vs. "wants", analyzing how particular programs will impact the organization and its employees,

and determining the projected adequacy of a particular program idea in relation to a specified problem or goal.

This is the information which should be taken to the administrator. It involves more intense explanation of institutional and employee needs and/or deficits from an administrative purview. It eliminates "softness" of programming and forces the educator to be a program manager vs. program developer. The term manager also implies that there will be follow-through and evaluation of the program effectiveness and efficiency.

An example of the type of inquiry that should be used by the Staff Development Educator to determine the program adequacy is depicited in Figure 2. It illustrates one model that can be used by the educator and the administrator in exploring program potential and program impact on employees, the organization, and patients.

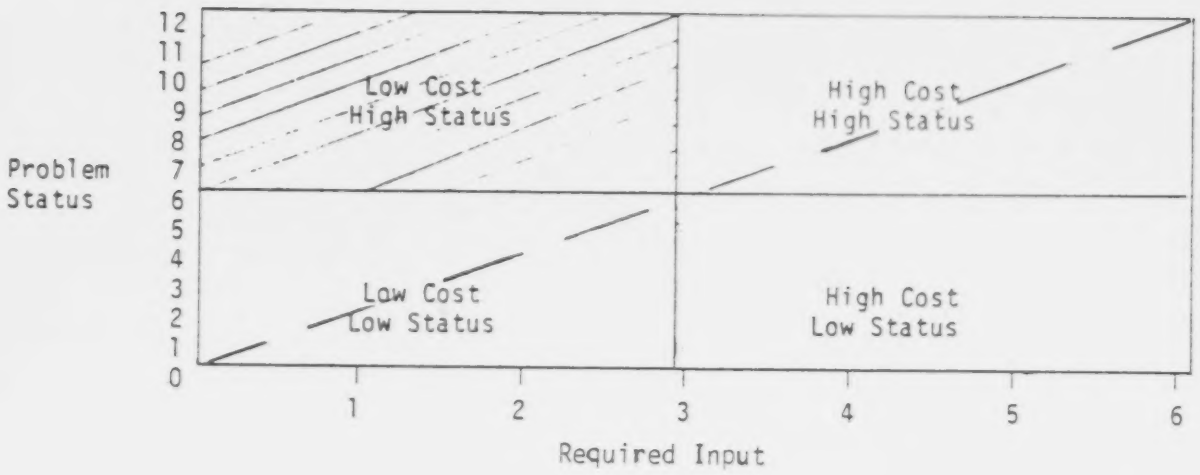
Improved Needs Assessment

Current methodologies for conducting needs assessments are often simplistic and superficial. Employees are asked what they need to know to perform their jobs better and what they would like to know. Managers are asked to identify their employees' educational needs. This is usually accomplished through questionnaires or verbal discussions. These approaches are subjective and "nurse-centric". They focus on what the nurse needs rather than on what results are desired for better and more cost effective care.

In order to provide more cost effective staff development programs, and use staff development programming to minimize costs and increase effectiveness we must begin our needs assessments by identifying the desired patient care and organizational outcomes and deficits in achieving those. Figures 3 and 4 demonstrate the differences between what I call the "soft"-"hard" approaches to needs assessments. In Figure 3, staff are asked to identify needs, programs are given based on that, and programs are evaluated based on the participants' objective responses. In Figure 4, there is an analysis of the functioning of the patient care delivery system, including nursing care, patients, and the organization. This analysis is reviewed in relation to desired outcomes. Goals, problems, deficits, and so forth are identified as a result of this analysis and programs are planned to address these. The evaluation of the program then occurs in terms of attainment of desired outcomes.

One way to begin improving needs assessment is by more closely linking educational programming with quality assurance and research. Education must become aligned with the inquiry of the research process and quality assurance. In quality assurance, standards are established for patient care and studies conducted to monitor achievement of those standards. Research investigates the occurrence of phenomena, analyzes relationships, and suggests cause and effect. Both of these activities provide data to educators and managers regarding patient care needs, staff learning needs,

Figure 2. Program Viability



1. Status

A. Danger, Urgency	0	1	2	3
B. Frequency	0	1	2	3
C. # people benefitting	0	1	2	3
D. Organizational Impact	0	1	2	3

2. Input

A. Direct Costs	0	1	2	3
B. Personnel Costs	0	1	2	3

Figure 3. "Soft" Needs Assessments

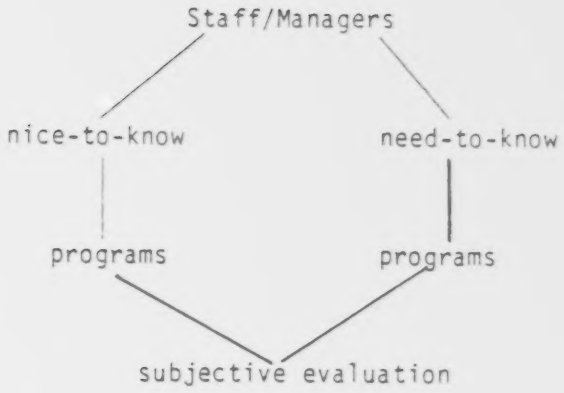
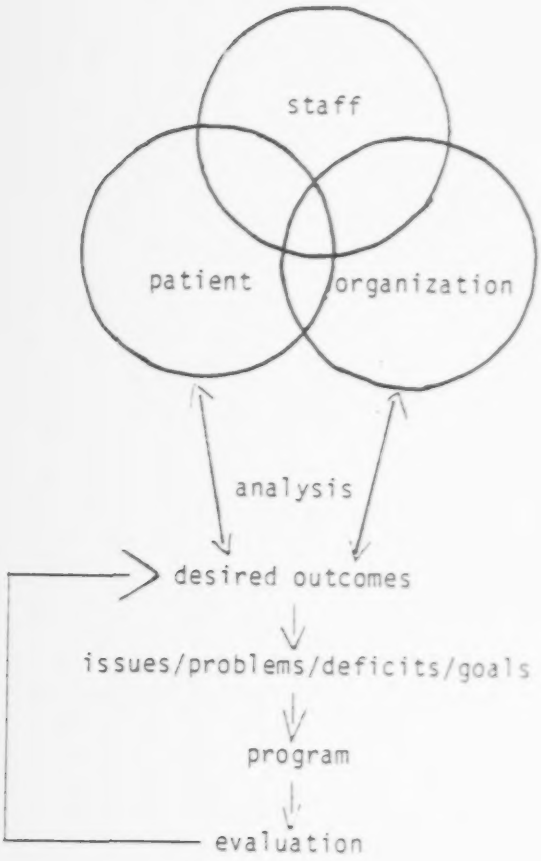


Figure 4. Results-Oriented Needs Assessments.



organizational needs, and means of changing behaviors to improve the attainment of the desired outcomes.

At our institution, we conduct yearly formal written needs assessments. Staff are required to list program topics they need and/or want. Typical results include topics such as growth and development, milieu, and schizophrenia. We usually provide programs on some aspects of these, a cognitive approach with a lecture, film, or discussion. Afterwards, we have not identified any changes in patient care or employee behavior that was a result of a program. We now try to focus more on desired outcomes. For example, recently, in our department, there were several incidents of support service employees being disciplined for inappropriate relationships with the patients on our psychiatric units. We are now planning programs on therapeutic relationships that address the outcomes we have identified for staff behavior with patients. We will be able to monitor the effects of this program by observing support staff behavior, monitoring the number of complaints from nursing staff, managers, patients, and families and talking with support services' supervisors about the actual behavior of their staff.

Practice Related Performance Objectives

This third aspect of result oriented programming is the development of practice related performance objectives. I challenge you to recall recent objectives of programs that you have attended. In fact, we can look at the objectives of this program. I have listed one of my objectives for this presentation as being that the participant will be able to describe Deniston's evaluation model. Actually, my response to this objective as it stands alone is, "So what?". Can the institution that is paying you to attend this program afford your being able to describe Deniston's model? I would assume not. What they and you may want is to be able to implement a component of the results oriented program or a component of Deniston's concepts in your facilities that would save on costs.

We must begin to look at outcomes in terms of impact on the employee, organization, and patient care. For example, health care consumers are paying nurses to conduct thorough mental status exams, not to identify the components of the mental status exam. We must be oriented towards behavioral changes and practice. We do not want to teach nurses about the cost of Chux; we want them to use 10 percent less Chux on each unit as a result of knowing how expensive they are.

Competency based educational programs represent one attempt to address the issue of performance objectives. In competency based programming, performance objectives or outcomes are identified and the learner works to achieve those objectives. We recently implemented a competency based orientation program in the Psychiatric Hospitals for psychiatric nursing staff. People are excited about this program because it assists orientees, educators, and managers to focus on expectations of practice.

Certainly, I am not discounting knowledge, and educationally we know that the cognitive components are necessary for clinical application and

clinical decision making. However, we often stop with cognitive and negate its transfer into actual practice. This is enhanced when we plan learning activities that promote the application of knowl- edge.

Results Oriented Learning Activities

Learning activities in staff development programs often consist of lectures, discussion, film strips, or handouts. These instructional modes may or may not facilitate clinical application depending upon their presentation and use. General knowledge is important, but more important to a health care institution is application. I believe that more creative learning activities could and should be used in staff development. These may include self instructional modules, video-taping, role playing, answer and question sessions, and simulations. As objectives become more practice-oriented, learning activities will need to become more active to accomplish the intent of the objectives.

Clinical and Administrative Supervision

Several of my colleagues and I have long felt that clinical and administrative supervision were the missing links between staff development and improved clinical practice. We have observed many employees attending various programs, becoming excited about the content and its implications for practice. However, they return to the units and to the daily routine and get little support, recognition, or assistance in implementing the new staff development content. And, as we all know, if learning is not used, it is usually lost after a given period of time.

Administrative and clinical supervision are required in order to achieve maximal use of staff development and content. Administrative supervision sanctions the content application and facilitates the employees' motivation for transferring the knowledge. We have found that in-service presentations on writing nursing care plans were not meaningful unless the employee knew that the Head Nurse or Assistant Head Nurse would follow up on monitoring the care plans and use the data in the employee's evaluation. In turn, the employees needed clinical supervision from an individual who could assist them in actually writing and revising nursing care plans to meet patient care needs, and regulatory and institutional requirements. This usually was the educational coordinator on each unit who was given time to review and write nursing care plans for staff members in a teaching, coaching mode. I recently taught a continuing education program on Assessing Organic Mental Disorders. Feedback from the participants said it would have helped if someone had observed them performing mental status exams, and commented on their clinical write-ups in the practice area. The link between supervision and staff development is a fertile area for research. My hypothesis is that we would be more efficient and effective if we had fewer but better targeted programs with administrative and clinical follow-up in the practice arena. We have just hired a Clinical Nurse Specialist in our department who will spend a portion of her time

providing staff development programs and then coaching participants on the clinical units in the application of the content. We hope to begin some actual research on this topic.

Improved Evaluation

Evaluations of staff development programming are usually superficial. Employees are asked if they met the objectives and liked the program. Rarely is there an evaluation of the program's adequacy, effectiveness, or efficiency (to use Deniston's terms).

Kirkpatrick (1975) has identified four levels of program evaluation:

1. subjective impact
2. the occurrence of learning
3. actual changes in behavior
4. results to the organization

Usually, level one is investigated via the use of "happiness questionnaires" which provide a subjective, immediate response. Participants are asked if they like the program, if the room was too hot, and if the teacher had adequate knowlege of the topic area. Occasionally, level two is achieved when post-tests are given to the participants. Rarely, have I seen evaluation of changes in behavior or results to the organization. Why? Probably because the original program developers did not consider these two levels in their planning. Using a results oriented program model, levels three and four become the focus of the program planning rather than levels one and two.

The use of performance objectives certainly fosters better evaluation since behavioral outcomes are identified and criteria established to evaluate achievement of the outcomes. Competency-based education as I have noted before, accomplishes this very well. Contracting is also a method that facilitates higher level evaluation. The learner contracts to perform certain behaviors as a result of specific learning experiences. This in particular, builds in accountability for the learner to act on what is presented.

We need to conduct more evaluation research related to patient care and cost outcomes. For example, will the program for psychiatric nursing staff on specific interventions with patients with sleep disturbances result in those patients actually sleeping better more quickly and possibly reducing their hospital length of stay by three days? Again, the need for a closer link between education and research becomes even more evident when we discuss the need for better evaluation methodologies.

Conclusions

The results oriented programming model consisting of the components I have described above, refocuses staff development programming from justifi-

cation of 'nice to know' or 'need to know' programs to an approach based on more indepth inquiry, particularly by the program developer who acts as program manager. What are our desired outcomes in terms of patient care, nurse behavior, and health care costs? How can we plan programs that will effect desired changes in these areas?

We must keep in mind that staff development educators, in order to be more efficient and effective in today's health care world, must impact the goals and objectives of the organization. To accomplish this, we need to work with managers to focus on the desired outcomes and plan those programs that will assist in that process. Utilizing this method, staff development can be done more efficiently; and staff development programming can be used to assist nurses in addressing cost containment issues.

References

del Bueno, Dorothy and Kelly, Karen. How effective is your staff development program? Journal of Nursing Administration, April, 1980.

Deniston, O. Lynn et. al. Evaluation of program efficiency. Public Health Reports, July, 1968.

Deniston, O. Lynn and Rosenstock, Irwin. Evaluating health programs. Public Health Reports, September, 1970.

Kirkpatrick, Donald L. Techniques for evaluating training programs. In Evaluating Training Programs; Madison, Wisconsin: American Society for Training and Development, Inc., 1975, pp. 2-17

Miller, Sutherland and Wilson, Nancy. The case for performance contracting. Administration in Mental Health, Spring, 1981.

Sovie, Margaret. The role of staff development in hospital cost control. Nurse Educator, Nov.-Dec., 1980.

Nursing Strategies to Promote Cost Effectiveness: Managing Disturbed Behavior on Medical/Surgical Nursing Units

by Maureen M. Corcoran, RN, MSN

Co-Authors: Mary Lou Monahan, Michele A. Bender, Sarah, M. Keane, Ruth Tompson, Georgia Wagner, Nancy Gorenshek, and Marion Bittman

In 1982, University Hospitals of Cleveland (UHOC) spent $75,000 to provide 1:1 nursing care to a population of patients on general medical/surgical units requiring constant attendance to manage very disturbed, confused or suicidal behavior. This money was spent to supplement the regular nursing staff assigned to the units since staffing was not perceived to be adequate to meet the needs of these patients. The concern about this expense and the increasing number of requests for 1:1 sitters for patients provided the impetus for this study.

History

Since 1965, UHOC has had several funds and endowments donated by individuals to provide 1:1 nursing care or observation for patients needing such care who are unable to pay for it themselves. For the purposes of our project, private duty staff obtained from a registry to care for a patient requiring constant attendance are referred to as "Hospital Pay Private Duty" (HPPD) personnel. When the funds described above were depleted for a given year, the Department of Nursing's General Operating Fund was used to pay for these services.

In 1964, 50 percent of HPPD nursing care hours was given by RN's and 50 percent by LPN's. These figures decreased to 25 percent and 75 percent respectively by the following year. By 1981, the percentage of care given by RN's had decreased to only 3 percent. One year later the percentage was only 1.0 percent, while the percentage of care being provided by unlicensed personnel functioning as "sitters" increased dramatically. In 1981 and 1982, 89 percent of all HPPD funds were spent for sitters.

Although no data are available about the supply of RN's, LPN's or sitters in these years, several factors have influenced this trend. The increase during this time period in ICU beds has virtually eliminated the need for providing 1:1 intensive care on the general units. In addition, the increased proportion of RN's to ancillary staff employed by the hospital has improved the ability of the nursing staff to provide more individualized care to patients.

Adapted for publication from presentation at MAIN conference September 1983 entitled "A Project to Control the Use of Hospital Paid Private Duty Nursing Personnel to Supervise Patients Requiring Constant Attendance."

At the same time, there has been an increase in two populations of patients requiring constant nursing supervision. These are the elderly, confused patient population and those who are diagnosed as being suicidal either because of previous attempts to commit suicide prior to admission, or because of their present mental state. These two populations account for the increase in the use of sitters over recent years, since the major identified need of these patients was for protection and safety. While the nursing staff on the units was adequate to care for these patients' other needs, they were not able to provide the very close observation felt to be necessary for these patients.

A further historical perspective can be found in the philosophy of the hospital, which is to provide services to patients regardless of their ability to pay. The philosophy of the Department of Nursing states that quality nursing care based on the assessed needs of the patient will be provided to "alleviate the stresses of illness and injury, and to provide the necessary supportive and restorative care." Thus the use of resources, including HPPD personnel was deemed to be necessary.

Identification of Problem

In 1982, private duty services, which were paid for out of hospital funds, accounted for 61 percent of all private duty services to patients. Two years prior, the hospital paid for 53 percent of the total of private duty services, while families paid for 43 percent. During the same time period, there was a 24.4 percent increase in the number of requests for all private duty services. As mentioned earlier, in 1982 the private duty expense was $75,000. The trend of increasing utilization of these services and the lack of a system to monitor and evaluate their impact on patient care was identified as a problem requiring study.

An eight-member committee composed of two Assistant Directors of the medical/surgical service, two Clinical Supervisors, the Quality Assurance Coordinator, the Psychiatric Clinical Nurse Specialist and the Assistant to the Director of Nursing was established to investigate the problem. In collaboration with the Frances Payne Bolton School of Nursing a doctoral student assisted with the project.

To assist in defining the problem, the medical diagnoses of patients requiring private duty nursing were examined. A variety of medical diagnoses were found in the study population. These included amputation, overdose, myocardial infarction and confusion. As we anticipated, the medical diagnoses were not helpful in identification of patient behaviors of concern to nursing. In planning care, behavior such as confusion, suicide attempts, combativeness and repeated falls required particular attention.

After reviewing the problem and the preliminary data, the committee selected the following goals for the project:

1. To increase the nursing staff's awareness of utilization of resources for the population of patients requiring constant attendance.

2. To improve the documentation of patient care including the justification for use of HPPD sitters (or RN/LPN).

3. To evaluate the effectiveness of the nursing care planning with particular emphasis on care of behavioral problems which require constant attendance.

4. To reduce expenditures for HPPD personnel without compromising quality of nursing care.

Review of Literature and Conceptual Framework

As discussion of the problem continued, a literature review was conducted. Articles focusing on the nursing management of suicidal (Sumner & Gwodzy, 1976; Faberow, 1981; Cohen, 1977; Clanton, 1978), confused (Isler. 1975), and out-of-control patients (Anders, 1977; Lion et al., 1972) described the principles of managing individual patients safely and therapeutically. The authors stressed individual care planning, careful observation, frequent reality interpretation and re-orientation, and purposeful interaction between patient and nurse. A few studies, such as that of Hearn and Potts (1978) and Kuhn (1980) examined patient characteristics to predict staffing patterns for groups of patients. Faberow (1981) found an average suicide rate in medical/surgical patients of 41.7 per 100,000. He states that 72 percent of general medical/surgical patients committing suicide in his population of Veterans Administration Hospitals and hospitals in Missouri killed themselves while in the hospital. Acute confusional states are frequently observed in general hospital populations, but are often not included in final diagnosis of discharged patients (Murray, 1978).

No studies were found which analyzed the use of private duty or regular nursing staff to manage patients requiring constant attendance to ensure their safety.

Schlotfeldt's paradigm was selected as the framework for conceptualizing the problem and suggesting possible interventions. Schlotfeldt views the goal of nursing practice to be the stimulation of man's health-seeking behavior. This includes enhancing the patient's motivation to attain and retain maximum health and function to avoid disease and disability, and to attain or regain the highest possible level of health, function, and productivity when afflicted with genetic inadequacy, injury, disease, and deprivation of several kinds (Schlotfeldt, 1972). Health-seeking and coping behaviors are employed by patients as means to achieve their goals. Nursing strategies to assist patients' health-seeking and coping behaviors

include appraising, compensating, sustaining, supporting, guiding, teaching, and motivating modes. In some situations nurses compensate for man's health-seeking behaviors, whole in others nurses alter, maintain, or enhance them using a variety of means and modalities. These principles of health-seeking and coping behavior and intervening variables which alter physiological, psychological and social mechanisms can apply to individuals or groups.

Applying the Schlotfeldt paradigm to this project, we had identified a segment of the patient population who required constant attendance. As well as being expensive, constant attendance was not sufficient to compensate, sustain and promote health-seeking behaviors. The Nursing Department historically had been faced with an inadequate number of personnel to provide the necessary sustaining and supporting interventions with which to improve these patients' coping behaviors. The Head Nurses, Supervisors, and Assistant Directors had recognized that there was a subtle labeling of patients once HPPD staff were obtained. The staff tended to view these patients as "hopeless." This perception set up a self-fulfilling prophecy. In some cases difficult patients are provided with a sitter and the nurse may not actively attend to the application of supportive, sustaining and compensating strategies because safety is maintained. With a lack of professional intervention the patients tended to remain confused and agitated. Data collection provided by observation of these patients suggested that the administrative nurses' assessments were correct. The patients continued their maladaptive behavior and thus were thought to be hopeless.

Through discussion by the Psychiatric Clinical Nurse Specialist with the HPPD Committee it was realized that the staff's requests for additional help could be viewed as their own coping behavior. They sought support and relief from their own stress by requesting that HPPD personnel be obtained to assist them with the care of these difficult to manage patients. Their withdrawal from these needy patients resulted in a lack of aggressive nursing managment and allowed the patients to continue their aberrant behavior. Tudor (1952) found this same pattern in her classic study of mutual withdrawal in a psychiatric population.

The preliminary data collection had three major thrusts. First, although the signature of the Supervisor or Assistant Director is required to order an HPPD sitter from a registry, the assessment of the Head Nurse determines the need. A survey of Head Nurses was done to answer the following questions:

1. Why do you order a sitter for a patient; and
2. What questions do you ask yourself or the nurses caring for the patient?

Second, a retrospective review of medical records was made of patients for whom sitters were requested in the previous year. Data included age, diagnosis, demographic characteristics and nursing care problems and interventions. Finally, a six week pilot, using a sample data collection tool,

was completed for all patients requiring private duty care, whether it was paid for by the hospital or the family. From the pilot a profile of patients needing sitters was developed.

Report of Patient and Organizational Interventions

The committee decided to intervene on two levels. Interventions at the individual patient level were aimed at assisting nurses to plan care which facilitated patient coping behaviors. Interventions on the nursing unit level sought to facilitate nursing management of the patients' care and to improve allocation of personnel resources, both hospital staff and HPPD personnel.

Intervention at the patient level included the active involvement of one of the four Psychiatric Clinical Nurse Specialists in the Medical/Surgical service in each situation where disturbed patient behavior was identified by nursing staff. The Psychiatric Clinical Nurse Specialist made an assessment of 1) frequency and type of nurse-patient interactions according to predetermined criteria, 2) prescribed medications and their uses and 3) use of restraints. The Psychiatric Clinical Nurse Specialist guided the staff in implementing nursing care plans for aggressive management aimed at improving the patient's coping behavior.

Organizational level interventions included initiation of a system to inform the Psychiatric Clinical Nurse Specialists of patients the staff believed required constant attendance. This new tracking system was explained to staff nurses and positive feedback about reduced expenditures for sitters was provided. Second, the administrative nursing staff re-allocated nursing assistants to provide sitter services on the units as needed. Third, the actual use of HPPD personnel by hours and dollars, was compiled monthly and reported to the administrative nursing staff of each nursing unit. In addition, the use of the hospital staff, in lieu of sitters, was recorded by the Staffing Coordinator for Medical/Surgical Nursing. Finally, the project committee conducted a post-intervention chart review.

Impact of the Interventions

The pre-intervention chart review consisted of a convenience sample of 27 patient records selected from the population of all patients who received care from HPPD personnel in 1982. The post-intervention chart review consisted of a concurrent review by the Psychiatric Clinical Nurse Specialist and a retrospective review by an expert panel from the project committee. The post-intervention review consisted of 25 records from patients who received care from HPPD personnel from March through July, 1983.

Using Schlotfeldt's (1975) paradigm, nursing interventions were assessed in terms of how they would assist the patient in realizing his or her maximum potential for health and optimal function. Elements of the nursing strategies that were required for "adequate" documentation included

some attention to safety measures, assessment parameters appropriate for the nursing care problem identified, and plans that were directive and descriptive.

The content analysis of the nursing interventions was conducted by a three-judge panel. The panel was chosen from the committee and consisted of two master's prepared medical/surgical nurses and one master's prepared psychiatric-mental health nurse.

In the pre-intervention chart review, 13 of 24 care plans were judged "adequate" compared to 21 of 25 in the post-intervention review. It was further heartening to find that the records that comprised the "not adequate" portion in the post-intervention review were three cases where the patient was in the hospital 24 hours or less, and the Psychiatric Clinical Nurse Specialist did not have an opportunity to work with the staff in care planning.

From the post-intervention review, the committee concluded that there had been an overall improvement in the quality of nursing care, as measured by an increase in the quantity and quality of nursing documentation, especially in the specificity of the care plans. The concurrent involvement of Psychiatric Clinical Nurse Specialists resulted in better nursing care plans and the added element of evaluation of nursing care which had previously been lacking. The data also indicated that the hospital norm favors the use of personnel and mechanical restraints, rather than restraining patient behavior by chemical means (tranquilizers, sedatives, etc.).

A. A comparison of the pre and post chart review revealed the following:

1. The average number of nursing interventions de signed to compensate, sustain or support healthseeking behavior, increased from 5.9 to 7.8 per nursing care plan.

2. The quality of the nursing interventions improved dramatically, as assessed by the expert panel.

3. There was no change in the pattern of use of physical restraints, or in the number of sedatives, antipsychotics, antidepressants or tranquilizers ordered for patients.

4. Documentation on the patient's chart that a sitter had been initiated increased from 65 percent to 84 percent.

An indepth discussion of the organizational impact of this project is beyond the scope of this paper. Briefly however, the financial monitoring has revealed an 87 percent decrease in the hours of HPPD sitter usage for 1983. This represents a saving of more than $66,000. In addition, the re-allocation of resources during the post-intervention period resulted in an increased use of hospital staff over registry staff for this function. Sixty-four percent of personnel assigned as sitters were from our own re-

allocated auxilliary personnel. Finally, the project data demonstrated the impact of Clinical Nurse Specialists on quality of nursing care, particularly in collaboration with the administrative nursing staff.

Summary

This report describes the efforts of a nursing service to control the cost of caring for a population of disturbed patients found on general medical/surgical divisions without compromising the quality of their care. Using Schlotfeldt's paradigm for nursing strategies, interventions were implemented on both the patient and unit levels. These resulted in a drastic reduction in costs of caring for these patients, nursing staff were better able to assess the needs of patients and communicate these to the supervisory staff, and nursing documentation and interventions reflected a significant increase in quality of nursing care.

References

Anders, R. L. When a patient becomes violent. American Journal of Nursing, 1977, 77, 1144-48.

Clanton E. M. Suicide prevention: nursing intervention. Issues Mental Health Nursing, 1978, 1, 73-83.

Cohen, S. Helping depressed patient in general nursing practice. American Journal of Nursing, 1977, 77, 1007-38.

Faberow, N. L. Suicide prevention in the hospital. Hospital & Community Psychiatry, 1981, 32, 99-104.

Hearn, C. R. & Potts, D. The effects of patients' individual characteristics upon activity times for items of nursing care. International Journal of Nursing Studies, 1978, 15, 23-30.

Isler, C. Who says senile geriatric patients are untreatable? RN, 1975, 38, 39-42.

Kuhn, B. F. Prediction of nursing requirements from patient characteristics. International Journal of Nursing Studies, 1980, 17, 69-78.

Lion, J. R., Levenberg, L. B. & Strange, R. E. Restraining the violent patient. Journal of Psychiatric Nursing & Mental Health Service, 1972, 10, 9-10.

Murray, G. Confusion, delirium and dementia. In Massachusetts General Hospital Handbook of General Hospital Psychiatry. St. Louis: C. V. Mosby, 1978.

Schlotfeldt, R. M. Nursing in health care. Nursing Outlook, 1972, 20, 245-46.

Schlotfeldt, R. M. The need for a conceptual framework. In (Ed) Verhonik, P. J. Nursing Research. Boston: Little, Brown & Co., 1975.

Sumner, F. C. & Gwozdy, R. A. A nurse for suicidal patients. American Journal of Nursing, 1976, 76, 1972-3.

Tudor, G. E. A sociopsychiatric nursing approach to intervention in a problem of mutual withdrawal on a mental hospital ward. Psychiatry, 1952, 15, 193-217.

Williams, M. A., Holloway, J. R., Winn, M. C., Wolanin, M. O., Lawler, M. L., Westwick, C. R. & Chinn, M. H. Nursing activities and acute confusional states. Nursing Research, 1979, 28, 25-35.

The St. Anthony Park Block Nurse Program

by Barbara O'Grady, RN, MSN
Marjorie Jamieson, RN, MS

At a time when public agencies around the country are struggling to reconcile unmet community needs with tight budgets, the St. Anthony Park Block Nurse Program in St. Paul, Minnesota provides a promising example of how community initiative can redesign public services to make them less expensive and more effective.

The Block Nurse Program is a community program in the St. Anthony Park Neighborhood that draws on the professional and volunteer services of local residents to provide nursing, companionship, and chore services to their elderly neighbors who would otherwise be forced to enter nursing homes.

How does the program work?

Enhancing the ability of a family to meet the needs of its own members is the cornerstone of the Block Nurse Program. The program organizes and supports what resources the family already has for meeting its own needs, and supplements those resources with a mix of services and supports from the neighborhood that the family alone cannot provide. These include nursing care, counseling and companionship, and a mix of support tasks which the family may not have time to accomplish on its own: transportation, bathing, errands and chores, physical therapy, and so on. These services are provided for and coordinated under the supervision of a professional nurse.

Registered nurses living within the neighborhood provide professional nursing care. Neighborhood residents who are trained as paraprofessionals at a local vo-tech institute and employed by a private homecare firm provide home health aide, homemaking, and chore services. Counseling and emotional support are available from two sources: neighborhood volunteers trained by people who have gone through the University's Peer Counseling Program, and neighborhood church volunteers known as "befrienders" who are recruited and trained by the Wilder Foundation. Other neighborhood volunteers including teenagers, college students, and scouts help with tasks that do not require special training.

Neighborhood residents needing help are identified in several ways: word of mouth from friends, contacts by churches and other community organizations, referral from hospitals, physicians, social service agencies, and so on. The program builds on neighborly interest in each other's well-being among local residents.

Services are arranged for and supervised by a "primary block nurse", a neighborhood resident who is on the staff of the Ramsey County Public Health Nursing Service. The primary block nurse is a certified public health nurse with 60 hours of special training in care for the elderly.

When someone needs assistance, the primary block nurse meets with the individual and his family to identify what help is needed and develop a care plan. Determination of an individual's needs is done in conjunction with the family physician, and in-home professional and support services are coordinated with the physician's medical plan of treatment.

The primary block nurse assigns a "block nurse" to teach and support the family in meeting as many of the needs as possible, and to deliver and supervise care that the family is not able to provide. The primary block nurse also arranges for and supervises the services of befrienders, peer counselors, and homemaker/home-health aides as needed. The primary block nurse consults with the block nurse on a regular basis and revises the care plan as needed.

Local registered nurses who are interested in caring for their elderly neighbors through the Block Nurse Program join the Ramsey County Public Health Nursing Service as "roster nurses" where they are oriented to home care, provided 60 hours of training in gerontological care, and assigned to work with individual "clients" in the neighborhood, under direction of a primary block nurse.

Where possible, the care plan focuses on assisting the client to overcome barriers to his independence; if needed, specialized physical, occupational, and speech therapy are available from the St. Paul Rehabilitation Center. Likewise, the program has ready access to back-up acute medical care through the client's own physician.

Who runs the program?

No new agency has been established to operate the Block Nurse Program. The Ramsey County Public Health Nursing Service is accountable for the services provided by the program, and the St. Paul District 12 Planning Council serves as fiscal agent for the program. A board of directors and an advisory board plan and direct the program and are comprised of neighborhood residents and representatives of the Ramsey County Public Health Nursing Service.

The program fits easily into the structure of the Ramsey County Public Health Nursing Service, even though it represents an innovative departure from the conventional service delivery system. A qualified nurse living within the neighborhood joined the county nursing service to function exclusively as primary block nurse for the St. Anthony Park Block Nurse Program, and to supervise a team of parttime roster nurses who are hired from the neighborhood for the sole purpose of working in the Block Nurse Program. All overhead and administrative functions associated with the nurses' employment are handled by the county. Among other benefits, this arrangement provides a structure through which some of the 48 registerd nurses living in St. Anthony Park can work part-time as "freelance" nurses in the neighborhood.

How are the services paid for?

Roughly fourteen percent of the services are reimbursed by Medicare. Additional costs are covered by Medicaid or third-party insurance. Homemaker services for low income clients were reimbursed by the county welfare department from Federal Title XX funds before those funds were cut. Home health services are reimbursed by Medicare, private insurance, or Federal Title XIX. A state program also exists which provides "alternative care grants" for low income persons to get care in the home who would otherwise require nursing home care.

Fees that are not reimbursed by one of the foregoing sources are charged to the client on a sliding scale determined by the individual's ability to pay. When clients cannot pay the full amount, philanthropic contributions from commuity businesses are used to cover the difference. Those funds are administered by the District 12 Planning Council.

What are the principal benefits of this program?

Better service: Care in the home is usually more satisfying and conducive to recovery than long-term care in an institution. However, without the Block Nurse Program many elderly residents with temporary health problems or a general decline in health would have fewer alternatives to a nursing home.

The Block Nurse Program makes care in the home possible in two ways. One is by harnessing and supplementing the resources of families to meet their own needs. The other is by identifying and responding to needs for help sooner than the traditional health care delivery system, making it easier to cure some ailments and to prevent others from occurring.

The Block Nurse Program draws on neighborhood resources not available to traditional health care providers, building on a spirit of community self-help that extends the reach of the family.

The program draws on established training programs and institutions for a coordinated mix of volunteer, paraprofessional, and professional services. A comparable scope of service is not available from conventinal health care sources. Those services that are available usually require a host of narrowly trained service personnel coming into the home to perform particular tasks. The Block Nurse Program avoids such disruptions and fragmentation by combining job descriptions so that only a few people are needed to perform a wide variety of tasks in one home, and by putting coordination and supervision of all personnel and support services under one individual, the block nurse.

Lower costs: Three main factors contribute to a lower overall cost of care. For people who can be helped to remain independent, care at home is less expensive than care in an institution. In addition, the Block Nurse Program has developed methods to make in-home care less costly than is typically possible through the services of professional home care agencies.

These methods include the use of local resources, enhancement of the family's ability to meet its own needs, and the use of paraprofessionals and volunteers, all under the supervision of qualified professional nurses. Finally, early diagnosis and treatment of health problems, education so that people can manage their chronic condition or disability, and the prevention of more serious problems all contribute to reduced long-term health care costs.

The fees for professional services under the Block Nurse Program are equal to or lower than fees for comparable services provided by conventional public and private agencies. For example, nursing care costs $22/hour. The rate includes the administrative and overhead costs incurred by the county nursing service. By comparison, the county nursing service charges its regular patients $30 for the first half hour of care and $18.00 for each additional half-hour.

Some private nursing services offer a lower hourly rate; however, they typically require a 4 hour minimum charge per visit, making the cost per case higher than under the Block Nurse Program.

In at least one respect, the Block Nurse Program incurs costs that the conventional delivery system does not: it provides services to individuals who do not qualify for reimbursement under government programs or private insurance policies. Some of these costs are recovered through fees, and others are recovered through philanthropic contributions made to the Block Nurse Program by area businesses. A case can be made that many of these services prevent the clients' health or financial resources from dwindling to the point of becoming a public responsibility, and therefore represent a savings to the larger community.

Proper incentives: Unlike the conventional health care delivery system, incentives under the Block Nurse Program favor maximum self-reliance and minimum use of costly professional services; early intervention and treatment of illness; management of chronic illness and disability; prevention and recovery rather than long term treatment; coordination and integration of services rather than fragmentation and specialization. To the extent that fees and philanthropic contributions cover the costs of services to non-qualifying individuals who need help, the program avoids incentives to institutionalize patients or overdiagnose needs in order to obtain public or third-party reimbursements.

How was the program created?

It was conceived by people living within the neighborhood who recognized the need for more accessible, lower cost in-home nursing care and who, because they were health care professionals, understood the limitations of the conventional delivery system in meeting that need.

The seeds of the concepts were discussed with community residents. Existing planning and service institutions were also consulted so as to build on the community's strengths and avoid competition for scarce

resources. These discussions resulted in broad community support. They also facilitated integration of the program into existing institutions--notably the Ramsey County Public Health Nursing Service--whose assistance helped the program get established and whose services were needed for such tasks as quality assurance, supervision, malpractice insurance, telephone answering, care referrals, and processing of cost reimbursement.

What are the implications of this program?

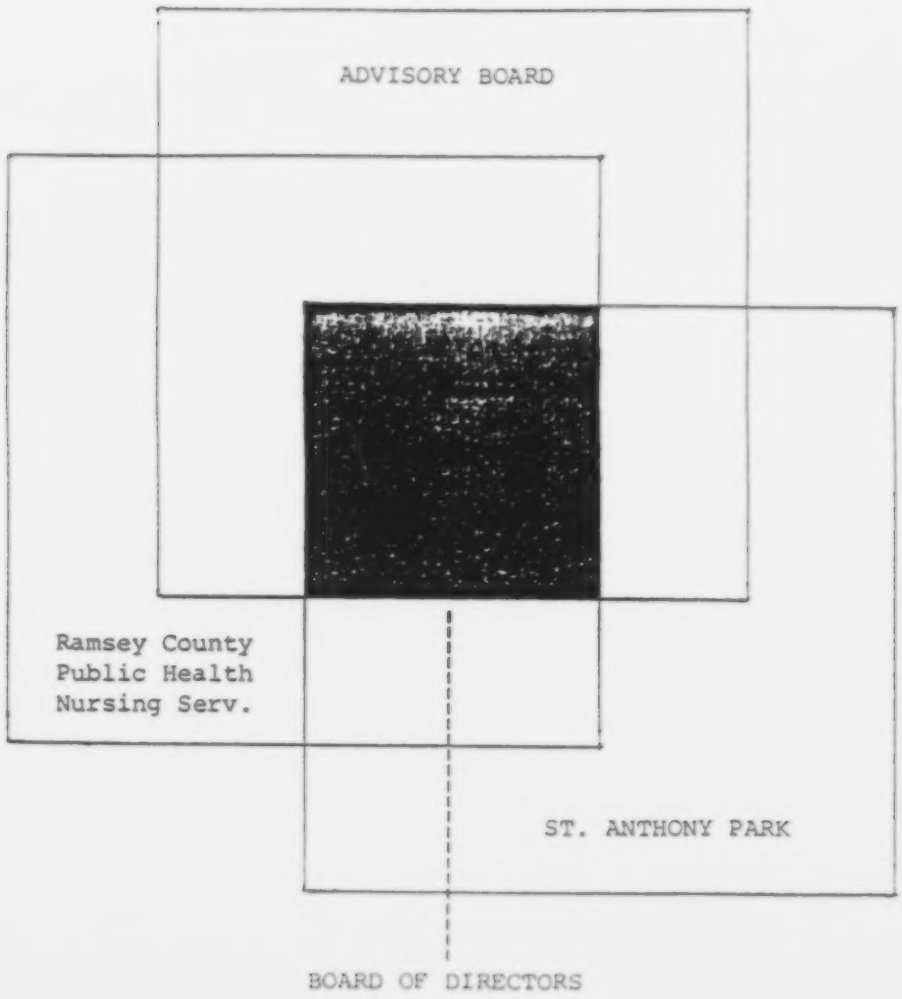
With assistance from the University of Minnesota, research has been undertaken to compare the costs of in-home care under the Block Nurse Program to the costs of nursing home care for persons who would require institutionalization without the Block Nurse Program. Researchers will also document the services needed by families and how they can effectively and efficiently provided. Furthermore, the researchers will identify which needed services are ineligible for government or third-party reimbursement. Hard numbers from this research will reveal the financial benefits of the Block Nurse Program. The findings may stimulate some re-thinking about how the community spends limited resources for meeting the needs of a rapidly growing elderly population.

For health care providers with an incentive to meet patient needs in the home rather than in an institution, and where the quality and cost of service are important considerations, the Block Nurse Program offers an attractice alternative to the more traditional public and private home-care services.

In addition to strict financial benefits, the program has implications for improving the quality and responsiveness of public services, enhancing the self-sufficiency of families and neighborhoods, and heightening the intimacy with which care is given. The program suggests that neighborhoods could play a substantially larger role than they currently play in shaping and carrying out public services; that established public agencies and providers of innovative alternative services make better allies than adversaries--each needs the other to get the job done right. The program suggests that traditional definitions of public services need examination. Perhaps many public services can be "unbundled" and "de-professionalized", allowing for greater self-help and use of volunteers, calling on specialists only to perform those tasks for which special training is required.

The Block Nurse Program could be started in other neighborhoods. In addition, the program model could be quickly adapted to meet other neighborhood service needs: providing nursing and support services to new mothers or sick children; addressing other service needs like child care, education, job counseling and support. Where skilled and caring people live together in communities with neighbors who need help, many opportunties may exist for responsive services modelled after the Block Nurse Program.

ST. ANTHONY PARK BOARD NURSE PROGRAM



BOARD OF DIRECTORS

Director of Services
Director for Research
Research Liaison
Dist. 12 Community Organizer
Dist. 12 Human Services Rep.
RCPHNS Director (or alternate)

ADVISORY BOARD

Physician
Legislators
Banker
Pharmacist
Nurses
Older Adults
Clergy
Social Worker
Business Rep.
Dentist

ST. ANTHONY PARK/DIST. 12

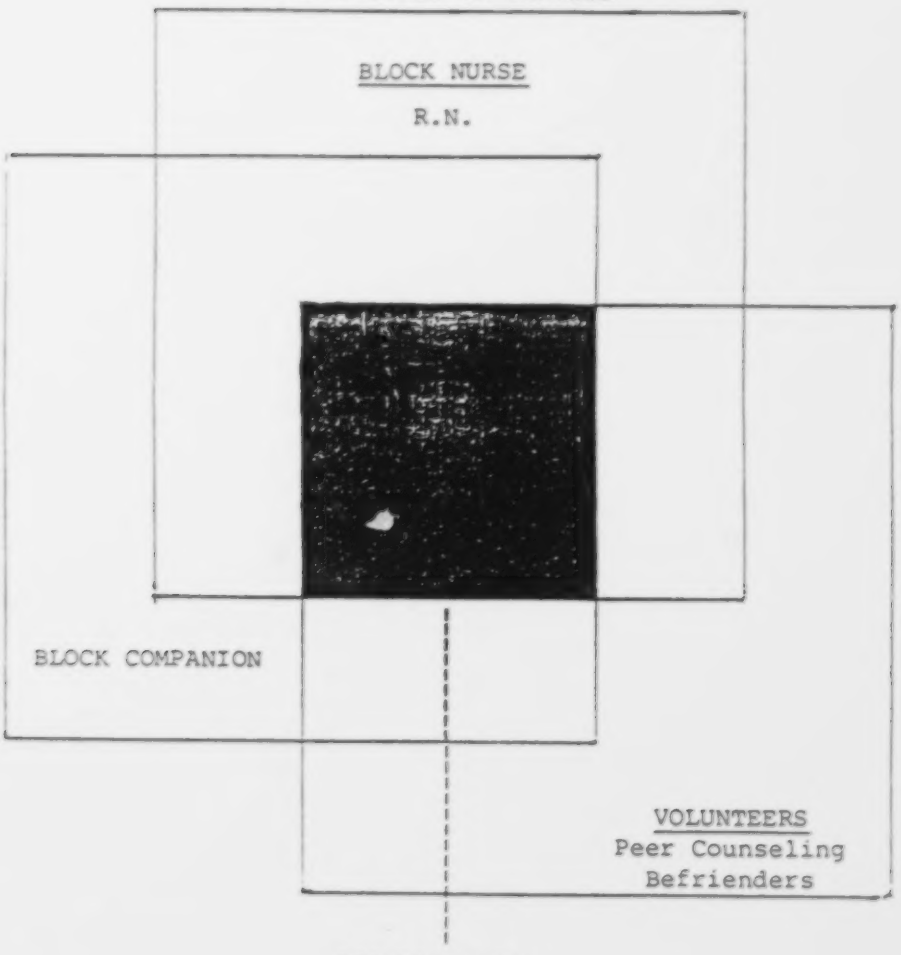
Clients/Nurses
Volunteers
Block Workers
Fiscal Agent
Funding Sources
Churches
Businesses

RAMSEY COUNTY PUBLIC HEALTH NURSING SERVICE

Director, Public Health Nursing Service
Allied Nursing Service Coordinator
Team 1 Supervisor

BLOCK NURSE PROGRAM

THREE TYPES OF SERVICE



BLOCK NURSE

1. Makes assessments.
2. Teaches disease prevention and health promotion.
3. Delivers nursing care.
4. Coordinates all cares case management.
5. Makes referrals, determines other services needed.

BLOCK COMPANION

1. Bathes, shampoos, etc.
2. Nursing assistance with disabled- e.g. range of motion.
3. Maintains clean, healthy, safe environment.
4. Help with food and nutrition.
5. Extends family's care.

VOLUNTEERS

1. Counseling, listening skills.
2. Referral source.
3. Respite care for caregivers.

Factors, Strategies and Opportunities for Cost Containment in Nursing Service

by Barbara V. Tebbitt, RN, MSN

Recently, I saw an anecdote which I thought was very applicable to this conference. A young couple was preparing their first budget. They decided on three major categories: food, clothing, and housing. They then conservatively projected the amount of money they would need in each category. Next, they projected what their joint incomes would be. Considerable time was spent trying to match projected income with projected cost. Finally, the young man said, "The way I see it, we can afford to choose two out of three."

There are two lessons for those of us in health care to learn from this anecdote as we address factors, strategies, and opportunities for cost containment. The first is we do have a choice. The second is we can not continue to have everything we have had previously.

Rising costs and the concern about those costs are not new to the health care industry. We have been toying with the concept of cost containment for over a decade in an attempt to make a transition from justifying prices based on services rendered (retrospective) to those based simply on predicted cost (prospective). The new legislation will now force us beyond cost and services to a new era of prospective pricing.

Factors

The factors necessitating and effecting cost containment in nursing services are no different than those plaguing society as a whole and the health care industry in particular. Those factors fall into five major categories.

First, expenditures in health care rose from $75 billion to $320 billion between 1970 and 1982. In recent years, inflation has increased costs, as Dr. Davis mentioned, to three times that of the Gross National Product.

Second, Ginzberg (1983) estimates the oversupply of the nation's hospital beds to be in excess of 150,000. The oversupply of physicians (140 per 100,000 persons in 1950, and projected to be 240 per 100,000 persons at the end of the decade) is an additional factor. The recent increase in technological growth and emphasis on ambulatory care have decreased occupancy and efficiency in acute care while simultaneously increasing utilization of ancillary services.

Third, the increased age of the population has put a greater drain on the health care resources. From 1970-1980 the number of individuals over 65 years-of-age rose 27 percent, and those over 85 years-of-age rose 48 percent. In addition, in 1982 individuals over 65 comprised 42 percent of our total inpatient days.

Fourth, prospective pricing, price competition legislation, and regulations have shifted much of the power in health care from provider to payor, ending our 20 year history of pass-throughs and our expansionist system that has been rewarded for spending and not for saving.

Resource limitations within health care are not recent. We have only to look back at the Great Depression and World War II to recall what resource limitations can mean. There is no doubt the major resource consumer and drive to increase costs since World War II has been the introduction of advanced technology. A positive factor about prospective pricing is that it will force hospitals into a more critical evaluation regarding capital expenditures for advanced technology and the human resources required to accommodate that technology.

The fifth factor, and one that will be considerably more difficult to address in responding to this decade's resource limitations, is the prominent change in worker values or entitlements. Employees are no longer content to have a job for which they are paid a fair wage. Employees today are, according to Peter Drucker, (1981) "knowledge workers." They don't just want a job, but meaningful work they can stucture. Their expectations of management have increased. They have a deep need to know the organization cares about them personally. They expect continuous communication and information. They expect to be involved in decisions and in developing shared objectives for areas which effect their work life. They expect growth opportunities and equitable rewards. Socialization and informality have taken on a new importance. Loyalty is no longer expressed to the organization but rather to the work unit.

Working effectively with these changed values will be both our greatest challenge and our greatest opportunity in developing cost containment strategies for nursing services over the coming decade. The days of managing simply by cajoling and influencing are behind us. Strategies of management for the future require mature and seasoned individuals with experience and knowledge in human resource management; data systems development, retrieval and evaluation; and most of all, in organizational reshaping. Each of these strategies requires innovation, creativity, and a boundless degree of energy in both the nurse executive and the nursing staff.

Strategies

What strategies will be most effective in addressing cost containment in nursing services? The answer is not a simple one. Requirements for comprehensive change in our systems and product lines (the services we offer) currently are bombarding us. Results are expected with rapid turnaround time. Change will be occurring much more rapidly over the next few years than it has for the past quarter of a century.

A significant amount of rote responses and resistance to change will occur in our service organizations largely because of the unknowns and un-

certainties of the effects of prospective pricing. Consequently, our environment will often appear out of control, or unable to accommodate change rapidly enough. We will feel as though we are, and often will be, orchestrating chaos.

We need to demonstrate to staff around us a commitment to them and to the goals of the organization. If we do not demonstrate this commitment, nothing will happen below us in our departments. This is a time for mentorship, and role modeling on the part of the nurse executive. Despite our mentoring efforts, it will not be uncommon for us to feel like frenzied puppets torn between people and their needs and values, and the demands of the system and its viability.

Our approach needs to be multifaceted. We must have a number of irons in the fire simultaneously. An effective initial step includes a department-wide analysis conducted in a number of major areas.

Productivity and the Quality of Work Life in Hospitals

Addison C. Bennett (1983) suggests the following areas be investigated:

- Philosophy, goals and objectives (What do you believe in? Where is your department going? How will you get there?);
- Organization arrangements and relationships (How will you posture yourself to respond most effectively to effects of prospective pricing?)
- Communication, coordination and collaboration (How do you interface clinical, administrative, and fiscal processes?)
- Management process and practices (Are strategic plans in place? Where will they lead your department?)
- Personnel administration and human resource management (How can you work most effectively with changed worker values in light of prospective pricing demands?)
- Culture, climate, and environment (What is the tone or feel of your department? What do you want it to be?)
- Policies, methods, and procedures (Are they workable? Are they equitable?)
- Management information systems (Do you have information you need when you need it?)
- Staffing methodologies and resource utilization (What are your productivity measures? How can you ready your department for 'downsizing'?)

- Reports and control (What methods and systems do we have to assist in producing more effective management?)

- Performance management (Have you clarified work expectations and accountability?)

Changes brought about in response to the findings of such an analysis will not by themselves, contain or reduce the department's budget. However, they have the potential for doing so, particularly in the areas of management information systems, staff methodologies, and resource utilization. Such changes will also definitely improve departmental efficiency and effectiveness, and enhance morale.

I would like to share with you some activities my employer, the University of Minnesota Hospitals and Clinics, has engaged in within the past two years in these eleven areas. These thoughts and activities are in no way meant to be comprehensive, but serve as examples:

1. Staff have designed and are currently piloting a self care framework on a station in each specialty, including intensive care. Our departmental framework is a combination of a number of self care frameworks. Our goal in the pilot is to determine if implementing such a framework in a tertiary care setting improves patient and staff satisfaction. Also, we are monitoring budget costs for implementation and potential monetary savings after implementation.

   The departmental philosophy, goals, and objectives have been changed to reflect concepts of the framework as well as to reflect the goals for the Hospitals.

   We have spent the past year clarifying and improving the definition of our planning process throughout the Hospitals and the Nursing Department. This has added a sense of purpose and responsibility within the organization that did not exist previously.

2. We completed a departmental work inventory by determining the major work or functions of the department for the future and changed the organizational structure to better accommodate the work that will need to be done, particularly in the area of management information systems. Lines of authority and decision-making within each division also have been defined. The structure has been in place for one year and a recent evaluation indicated response to the change was favorable.

3. Special emphasis has been and continues to be, placed on "consciousness raising" regarding the hospital's and department's future. We are educating employees to the fact that they are a vital part of keeping the hospital financially viable and that they will be involved in the process as well as being a key factor in maintaining that viability.

What we are finding is that staff do not recognize the need for cost containment. They do not believe cost limitations are real and they do not believe they can "tighten their belts" without diminishing the quality of patient care. We have set a goal to communicate with staff at least once a month as we become aware of the effects of prospective pricing on our organization and department.

In addition, in the area of communication and collaboration, a 1983-84 departmental objective is to work diligently to improve our relationships with physicians. Two areas are being pursued. The first is to improve communications and coordinate ongoing activities. Our goal is to have a team orientation in place and have nursing and medical staff believe such an orientation can assist us in responding more positively to the impact of prospective pricing strategies which will need to be put into effect in the patient care areas.

A one day seminar to achieve this goal is scheduled for October and will involve nursing and medical staff. Second, since physicians are responsible for 70-80 percent of all incurred care expenditures (which in turn nurses manage) we are working to decrease standing and automatic daily orders, and are monitoring ancillary use of all orders, particularly pharmacy, labs, respiratory therapy, and patient monitoring.

Our goal is to foster more conservative medical practice and more cost effective forms of treatment. Perhaps most effective in raising the consciousness of physicians is making charge information available to them. They often choose different modes of treatment and tests when they realize the costs associated with the procedure or test of their choice.

4. Consciousness-raising started within the nursing department with an educational session for management staff, including assistant head nurses and above. Changes in health care and impacts of recent legislation were identified. Leadership staff participation was sought in small group sessions regarding reactions or plans the department should engage in to be as pro-active as possible in addressing potential future cuts.

Staff ideas and feelings centered largely around indirect care activities which they requested be addressed first and suggested a number of areas for review. Those suggestions were synopsized and a consulting firm was engaged to observe and make recommendations regarding methods by which we might achieve monetary savings in indirect care activities.

Consultant findings indicated we could cut dollars without affecting direct patient care. This would, however, necessitate changes in: centralized versus decentralized efforts, role clarification, communication, decreased documentation, increased organization of work, decreased unit education hours, and decreased administrative time. The work pattern in each of these has been entrenched deeply on these units for over a decade. A participatory process will be used to facilitate this change, once projected limits have been determined for each unit.

5. In the areas of personnel administration and human resource management, two specific goals were pursued. First, a promotional model for clinical practice, education, and administration was developed. Second, a mandatory leadership series was developed for those entering administrative roles. Those aspiring to administrative positions are also allowed to attend the series but on their own time. Sufficient programming is currently in place for both clinical and educational training in leadership.

6. An organizational climate survey is near completion. An objective of the department for this fiscal year is to make changes within the department as appropriate, considering budgetary implications, after the survey findings have been shared with staff.

From the perspective of organizational culture, we are building into the roles of management staff the expectation that efficiency improvements are part of their daily routine and that we have a responsibility to provide mechanisms to monitor and direct those improvements.

We are exploring reward programs in areas such as cost effectiveness, special recognition, and cost effective or productivity credit toward promotion. Quality circles are supported provided budgeted hours are not exceeded (which has not been a problem). Work teams comprised of individuals from each of the nursing divisions of the four hospitals and the clinics accomplish the department's objectives.

7. Though seemingly inconsequential, perhaps the greatest morale booster in the areas of policies was the revision of the policy manual table of contents and cross-indexing format. This made the manual a more usable resource causing far less frustration and saving considerable "search time."

8. A major effort in the department has been to evaluate and improve our management information systems to obtain timely, relevant, simple, and interpretative data that will provide a continuous summary analysis by unit.

Interfacing our clinical, financial, and administrative data has been, and continues to be, a significant challenge. Systems for patient care management have been refined and systems for resource allocation and personnel management have been developed. Unit based systems to trace consumption of resources have been developed using intensity indicators. Our current efforts are being redirected to emphasize management of the product, however, instead of the process. This obviously required considerably readjustment in our thinking.

Computer software packages, (such as staffing and scheduling) are being explored on an ongoing basis to determine the percent of decrease in use of human resource the packages could actualize.

9. Resource utilization of our patient classification system is monitored bi-weekly and appropriate changes made.

   Productivity indicators for required versus worked hours ideally are kept between 105 and 110 percent. Education classes for appropriate use of patient classification have been renewed. A Manpower and Productivity Committee quarterly reviews each unit with first line and management staff and adjustments are made at this time.

As of July 1985 our classification system will be interfaced with Admissions and we will have computerized professional and non-professional care hour requirements identified every eight hours for each patient throughout their stay. This will assist us in profiling cost of nursing care by patient and by Diagnosis Related Groups (DRGs) in our facility.

A department objective for 1983-84 which has not been initiated yet is to involve the nursing staff in a study to identify areas of greatest value to patients in their care. Then, when we proceed to cut back, we can maintain the care components of greatest value to the patient, consistent with goals of treatment.

An additional departmental objective addresses staff involvement at the unit level to decrease utilization of supplies. Presently, we are spending as many dollars on managing, as we are on the purchase of supplies. This effort will also include the medical staff with a cost containment group in each area. In addition, the hospitals have recently formulated a Cost Containment Task Force consisting of nursing, administration, and physicians to study cost containment needs in multiple areas throughout the hospitals.

10. Reports and controls have been generated largely from the management information systems efforts and have provided workable tools to all levels of management in assuming greater accountability for their areas.

11. Performance management was primarily addressed through an intense effort at role clarification for all positions within the department with the purpose of decreasing overlap and duplication of work, thereby helping us to work smarter, not harder.

The above mentioned strategies have put out staff into a contingency planning environment and framework. We are beginning to discuss when we will defer hiring, when hours will be reduced, when vacations will be encouraged and when temporary or permanent layoffs may need to occur. We are simultaneously doing daily unit census tracing for acuity and case mix to keep a departmental barometer.

Fortunately, our census this past fiscal year has been the highest of recent years. Unfortunately, this makes the reality of our reimbursement or resource problems much more difficult for the staff to comprehend and support.

Opportunities

Futurists state opportunities for the 1980's in health care lie in four areas: generating volume, subsidizing ("lost leaders" are covered by "cash cows"), cutting back (downsizing staff), or cutting out losing product lines.

In this "decade of the dollar" our greatest opportunity in nursing service is that all of us in the service setting now have a common enemy, which will give us a new foothold with trustees, administrators, and medical staff. The statement from the comic strip Pogo seems very appropriate, "We have met the enemy and it is us." It is us collectively.

I mentioned in the beginning of this presentation that we have experienced several eras of great resource limitations, both during the Great Depression and in World War II. That constrained environment gave birth to innovations which have lasted four and five decades--some of which may last into the next century.

Personally, I am optimistic, sparked and spirited by the opportunities I envision for nursing service in the next decade.

We have the opportunity to become skilled in systems or methods development, monitoring, improvement, management, and particularly, in the areas of human resources and productivity. Considering 60-70 percent of the hospital's budget is in salaries, this will be an area reviewed for reduction. Having gained this knowledge and expertise we will have the opportunity to become more visible as we demonstrate our competency, thus adding to our credibility.

We have the opportunity to be involved in profitability, partnership, and power. There is money out there. We need to contribute to the entrepreneurial spirit that goes into finding it and adding it toward the agency's net income.

We have the opportunity to become contributors rather than observers as we move from a service orientation to a product line orientation in reshaping, redesigning, and rearranging our organizations and departments.

Organizations will become very creative in reorganizing to obtain the greatest dollar return. Most of that reshaping will occur in or around our areas of responsibility.

We have an opportunity to know and experience the benefits, the effects, and the detriments of competition and to be comfortable with all three.

Most of all, we have the opportunity to take risks by challenging ourselves and our staff to develop innovative experimental areas for new systems design. We need to think differently; we need to think "new." We need to think dollars with the ultimate goal of maintaining quality care.

What does all this mean? We will have to be change masters. According to Rosabeth Kanter (1983, p. 30), we will need to learn to operate effectively and efficiently in an unfamiliar context and within the constraints of the ups and downs of government regulations and technological developments. Bargaining and negotiating to accumulate information, support and resources to proceed with innovation will be essential. We will need to build our coalitions and persuade others to contribute to our cause. Our basic commodities will need to be a "knowledge market" for ideas and information; an "economic market" for resources; and, a "political market" for support and legitimacy.

A profile of a change master will need to include: skillful communication at all levels in the organization; the ability to orchestrate the department effectively; a demonstrated competence in managing systems and human resources, particularly in a time of increased complexity and rapid change; support and guidance of subordinates and encouragement of their full participation in the work environment; and willingness to take risks with new concepts; and an ability to view the risks as "investments" that will benefit the organization and staff.

Cost containment is like the mythical unicorn. It is not a formula. It is not a concrete being. Its value lies in the symbolic attempt to invoke a particular consciousness, to set into action a constellation of behaviors that will affect identifiable change. It is crucial we realize that this consciousness and these behaviors are individualistic. Each of us and each of our employees needs to participate willingly in this consciousness. We all need knowledge of assessment and measurement tools, but most of all, we need freedom and support to see old ways through new eyes.

References

1. Bennett, Addison C. Productivity and the quality of health services. Hospital and Health Services Administration. Spring 1980.

2. Drucker, Peter F. Behind Japan's success. Harvard Business Review. January-February 1981.

3. Ginzberg, Eli. Cost containment: what's wrong? Modern Health care. September 1983, pp. 6-7.

4. Hanley, Barbara. Worker values and motivation. Management conference, University of Minnesota Hospitals and Clinics, Minneapolis, Minnesota, November 16, 1982.

5. Hospitals. The times are changing. July 16, 1983. pp. 101-102.

6. Kaiser, Leland. Thoughts expressed at management seminars, "A futurist looks at health care." Deerwood, Minnesota, September 15, 1983.

7. Kanter, Rosabeth Moss. The change masters. The change masters: how people and companies succeed through innovation in the new corporate era. Reprinted in Savvy, July 1983. pg. 30.

Readings

1. Ahrens, James F., Frederick Earl J., Nackel, John G., Shade, David M., CPA, MBA and Whetsell, George W., MS, MPH. Illinois study determines impact on treatment methods on costs, productivity. In HFM, March 1980.

2. Barucco, Hugo. Fear and productivity: More closely related than we think? Management Review, January, 1981.

3. Boissoneau, Robert, PhD. Peer evaluation. Hospital and Health Services Administration, Spring 1980.

4. Broder, David S. The issues facing U.S. workers. The Washington Post, Spring 1980.

5. Byrne, Rusty Steiff. Information on productivity and the productivity crisis. Harvard Business Review, September-October 1981.

6. Caper, S. Philip, MD. Improved hospital productivity dependent on revised incentives. Hospital Progress, December 1980.

7. Caterinicchio, Russell Paul, PhD. A debate: RIMs & the cost of nursing care. Nursing Management, Vol. 14, No. 5, May 1983.

8. Cost containment can preserve quality of care, Hospital Peer Review, Vol, 8, No.7, July 1983, pp. 85-88, with permission from American Health Consultants Inc., 1983.

9. Curtin, Leah. Determining costs of nursing services per DRG. Nursing Management, Vol. 14, No. 4, April 1983.

10. Davis, Carolyne K. Nursing and the health care debates. Image: The Journal of Nursing Scholarship, Summer, 1963, Volume XV, No. 3.

11. Donaho, Barbara A. Implications for financial management in nursing. Presented at the 1982 ASNSA Annual Meeting.

12. DRGs could slow new technology: QTA. Modern Healthcare, September 1983.

13. Edwards, Sam A., PhD, and Novak, Deborah G., PhD. Statewide hospital productivity center offers managerial expertise, scientific standards. Hospital Progress, March 1980.

14. Ehlinger, Edward P. Implications of the competition model. Nursing Outlook, November-December 1982.

15. Ferebee, J. Spencer, Jr. Are your managers really managing? Management Review, January 1981.

16. Fisher, Delbert W. A review of organizational development. Journal of Nursing Administration, October 1980.

17. Focus on: Managing productivity improvement. Execu-Time, Vol. VI, No. 15, August 1, 1983.

18. Fralic, Mary Ann F., RN, MN, Dr.PH. The modern professional and productivity. Presented at the 1982 ASNSA Annual Meeting.

19. Gillette, Paul E. Computer must track patient costs. Modern Healthcare, September 1983.

20. Ginzberg, Eli. Cost containment: What's wrong? Hospital Management Review.

21. Grazman, Ted E. Managing unit human resources: A microcomputer model. Nursing Management, Vol. 14, No. 7, July 1983.

22. Hanley, Barbara. Worker values and motivation. Management conference, University of Minnesota Hospitals and Clinics, Minneapolis, Minnesota, November 16, 1982.

23. Happ, Barbara. Should computers be used in the nursing care of patients? Nursing Management, July 1983.

24. Hatvany, Nina, and Pucik, Vladimir. Japanese management practices and productivity. Organizational Dynamics, Spring 1981.

25. Head, Shyam S. and Shirk, Michael B. Human resources accounting system and productivity monitoring. Hospital and Health Services Administration, Fall 1979.

26. Herzog, Eric L. Improving productivity via organization development. Training and Development Journal, April 1980.

27. Jackall, Robert. Moral mazes: Bureaucracy and managerial work. Harvard Business Review, September-October 1983.

28. Kanter, Rosabeth Moss. The change master. The change masters: How people and companies succeed through innovation in the new corporate era. Reprinted in Savvy, July 1983.

29. Keeger, Arthur J. Hospitals will continue to treat all DRGs to snare 'contribution margin'. Modern Healthcare, September 1983.

30. Kukla, Steven F. and Bachofer, Henry J. Building up reporting systems. Hospitals, July 16, 1983.

31. MacStravic, Ph.D., and Fields, Nancy. Why occupancy isn't the best measure of hospital performance. Trustee, August 1980.

32. Magill, Kathleen A., RN, EdD. A hospital-wide qualimentry program. Hospital Topics, November-December 1980.

33. Mannisto, Marilyn. An assessment of productivity in health care. Hospitals, September 16, 1980.

34. Martiz, Diane G. Management principles and nursing: The inefficiency of efficiency. Supervisor Nurse, March 1980.

35. Marron-Cost, Joan. Productivity: Key to cost containment. Hospitals, September 16, 1980.

36. McCollum, W. Ernie, FHFMA. A delicate balance: Quality care cost efficiency growth programs. HFM, August 1980.

37. Nathanson, Michael. Computers crank out DRG cost DATA, but how valid is information. Modern Healthcare, September 1983.

38. Pabst, Donald F., PhD, CPA and Sutton, Frank C., Jr. Internal auditing - Helping control costs. HFM, February 1980.

39. Phelps, Charles E. Health care cost - The consequences of increased cost sharing. Santa Monica, CA: Rand, November 1982.

40. Punch, Linda. Nursing 'foremen' hold key to productivity under DRG system. Modern Healthcare, July 1983.

41. Ranftl, Robert M. Guidelines to productive management. Management Review, November 1979.

42. Scanlon plan provides real incentives for productivity. Execu-Time, Vol IV, No. 17, September 1, 1981.

43. Scheier, Neil R. Measuring productivity: A simple methodology. Hospital Topics, September-October 1979.

44. The times are changing. Hospitals, July 16, 1983.

45. Viers, Valdyne M. Introducing nurses to computers. Nursing Management, Vol. 14, No. 7, July 1983.

46. Wallace, Cynthia. Managing along product lines is key to hospital profits under DRG system. Modern Healthcare, September 1983.

47. Walsh, David S., and Johnson, Thomas J. Analyzing and solving productivity problems. Training and Development Journal, July 1980.

Cost Containment in Nursing Education

by Carol J. Peterson, RN, PhD, FAAN

As one reviews the literature on financing of and cost containment in nursing education, the issues and ideas generally fall into three areas:

1. The impact of health care cost containment on nursing education;

2. Cost containment within nursing education; and

3. Approaches to enhancing the development and financing of nursing education.

Although I will comment on each area, my primary focus will be on number two - cost containment within nursing education.

In relation to the impact of cost containment in health care on nursing education, I would like to pinpoint some concerns that nursing education leaders must monitor, if they are not doing so already. Specifically, as implementation of prospective payment and other approaches to cost control become realities and their impact on hospitals are more fully experienced, what will be the impact on nursing education?

1. Certainly the question of long term viability of the remaining diploma programs operated by hospitals will be a major question.

2. If more diploma programs close in this era of cost containment in hospitals, what are the implications for two-and four-year college programs in the area that may be pressed to expand or enter into new types of collaborative arrangements with such hospitals?

3. What will be the impact on the associate degree and/or baccalaureate programs that contract with hospitals for clinical experiences? Will there be increased pressure on these schools to pay for use of clinical agencies? As this question emerges, what analyses do those schools need to do to attach a dollar value to the service given by students and faculty through the clinical experiences?

4. Will hospitals accept the increasingly supported premise that a better prepared nursing staff is in the long run, most cost effective, or will there be, as some people fear, a wholesale movement toward using less expensive auxiliary persons to replace RN's wherever possible? What will this do to the job market for new graduates and ultimately, the viability of some nursing programs?

5. Related to number four is the question, will cost containment enhance the movement toward the demand and use of baccalaureate-pre-

pared nurses, or will it further complicate and delay resolution of the entry into practice question?

6. What curricular implications are there? What content on cost containment and finance needs to be incorporated into undergraduate and graduate curricula? What continuing education implications are there for possible widespread upgrading of head nurses and directors of nursing service to become more skilled in budget matters and financial analyses in general?

Although time limitations prevent further discussion of the above, these are key questions many of us must face within the next few years, if we are not already doing so. They are relevant to cite for the purpose of anticipatory planning.

I do, however, want to address the matter of cost containment within nursing education. My comments will be organized around the following position statements.

1. At the institutional level there must be a reaffirmation of the fact that nursing education is expensive, that it is more expensive than many other programs, and that the high cost of clinical education must be acknowledged by academic administrators even if cost containment strategies are identified and successfully implemented.

2. Given the above, there needs to be, at the institutional level, a reaffirmation that the nursing program is an integral and valued aspect of the institution's mission during a defined time period. If this is not possible, then an open, rational decision should be made to cease involvement in nursing education.

3. There should be open identification, confrontation if necessary, and hopefully, resolution of the biases against academic nursing in many settings which make it vulnerable to discrimination and harassment during times of system and/or institutional budget problems.

4. It is essential to recognize that the real cost of nursing education in higher education has not been reached yet or experienced in many settings.

5. Because of the high cost of nursing education, particularly the clinical aspects of the nursing major, systems, institutions, and the public must recognize that different approaches to financing may be necessary.

6. Nursing faculties have some patterns of behavior and functions that are incompatible with cost containment and, therefore, must be addressed.

7. Certain beliefs and practices in clinical education are perpetuated without supportive data. In times of financial problems and cost containment, these will be challenged and will be subject to change.

8. There are unique features of nursing education that can be defended to academic administrators, governing boards, and legislators. There are other aspects of nursing education that faculty cite as unique that are not defendable to those individuals or groups.

9. There are financial development and cost containment approaches in nursing education with great potential that should be explored for their benefit in times of financial distress and for their potential to strengthen and broaden nursing education.

Now I want to discuss each of these nine position statements in greater detail, addressing statements one and two together: Reaffirmation that nursing education is expensive, and the high cost of clinical education will exist even if cost containment strategies are identified and successfully implemented, and that the nursing program is an integral and valued aspect of the institution's mission.

It is essential to deal with these two points directly. If such action is not forthcoming through prioritizing and long range planning by the institution, the nursing dean or director, her executive committee, and her support system and advisory bodies, will have to take the leader ship role in achieving these two points. They must promote a pro-active stance rather than a reactive or defensive one.

I am very concerned about what I call the "whittle away" phenomenon in nursing education. I can think of several situations in the early 1970's when small, private colleges were very eager to start nursing programs. The nursing program was seen as a way to offset falling enrollments in other areas, to keep supportive area courses filled, and to provide access to federal monies. Often those programs were under-financed from the beginning because of the dependence on capitation dollars.

The motives overrode a real sense of incorporating the program into the institution's mission and service to its publics. Now, when times are rough and the nursing capitation dollars are gone, there is little or no operations and maintenance support for those programs, and they are subject to somewhat harsh yearly review related to student/teacher ratio. Each year a faculty member is lost, and little by little, the whittling process occurs.

Recently, I became acquainted with one program that appeared to have reversed this approach by dealing directly with points one and two. As part of the institution's long range planning effort, it was acknowledged at the outset that nursing education was and would continue to be costly. Further, it was reaffirmed that the institution wanted to keep its generic baccalaureate program. Some mutual parameters on enrollment and teacher/-student ratios were developed by the board of directors, the college central administration, and the nursing faculty. It appears that a new equilibrium has been reached in that institution, at least with the current administration. Now that chairperson does not have to defend the existence of a nursing program to administration and to the rest of the college on a yearly basis, which in itself, is a costly and energy-draining practice.

What about position statement three: There should be open identification - confrontation if necessary - and hopefully, resolution of the biases against academic nursing in many settings which make it vulnerable to discrimination and harassment during times of system and/or institution budget problems?

This statement is, of course, related to points one and two. For lack of a better label, we could call this "political exorcism," or perhaps in a more colloquial vein, "smoking out the villain." Without sounding too paranoid, I will say that I believe this bias is in almost every higher education setting where nursing exists. In good financial times, it is controlled and latent. In rough budget times, it emerges with signs of being destructive and overt. Episodes at several institutions in the past few years are classic examples of this problem.

This problem, however, needs some attention by the profession, the professional organizations, and individual nursing programs themselves. This might be an area where an organization such as MAIN could assist by developing a strategy packet, a videotape, or similar public relations materials. If nursing educators, nursing service directors, and hospital administrators could collaborate on this issue, a powerful force would be harnessed to call attention to the potential problem.

Additional dialogue with boards of directors and presidents could be established to avoid discrimination and arbitrary movement against academic nursing. I recognize how political these matters are and how naive my thinking may be. Philosophically, however, I believe firmly in the value of open constructive dialogue and problem solving, and I think it merits more thought and consideration. If the Strategic Arms Limitations Talks are worth pursuing with the Soviets then this approach has merit to address the biases against academic nursing education.

Now let us consider the fourth point: It is essential to recognize that the <u>real</u> cost of nursing education has not yet been reached or experienced in many collegiate settings.

In considering the high cost of nursing education we must remind ourselves that costs would be even higher if faculties in all institutions were prepared at the appropriate minimal levels. Across the country we still have hundreds of temporary bachelor's-prepared faculty filling budgeted vacancies where master's-prepared persons are needed, and hundreds of master's-prepared faculty filling positions where doctorally-prepared persons are needed. In addition, a similar issue exists with regard to nursing research. If all our university nursing programs were conducting research at the level characteristic of a mature discipline, such programs would be even more expensive.

Our goals and development as a growing, emerging profession will complicate the cost problem. Obviously, we want this profession to continue to develop doctorally-prepared persons and research, however, we must acknowledge the impact a developing discipline and faculty has on a budget.

Point five: the public must recognize that different approaches to financing may be necessary, also needs further interpretation.

Some institutions use differential tuition rates related to the cost of the major or program involved. Some high cost programs such as music, pharmacy, and engineering have special fees, such as clinical laboratory fees in sciences to cover the high cost of laboratory education.

Unfortunately, these approaches are often challenged in public education. Some administrators and students reject the idea of differential tuition, and argue for equal access in public higher education. Yet these are ways to offset the high costs of professional programs and it needs serious consideration.

The old saying that "you get what you pay for" has some truth here. Further, if students have been informed properly of a differential tuition or fee system and enter a program with knowledge of these costs, they should be expected to accept these facts and not harass the nursing program administration and faculty over this issue.

The next item, point six, is a key one related to cost containment in nursing education: Nursing faculties have some patterns of behavior and function that are incompatible with cost containment and must be addressed in times of financial concerns.

Dr. Margretta Styles (1976, pp. 738-744) published a poignant article titled, "In the Name of Integration," in which she addressed the cumbersome aspects of team teaching as it exists in some nursing faculties. She presented this mock advertisement in the article:

"Sometimes I fantasize that in nursing education we have developed team teaching as the ultimate refinement of the collegiate art of stuffing telephone booths or Volkswagens with as many people as possible. Which brings me to:

ANNOUNCEMENT

I hereby declare and sponsor a contest to recognize the largest teaching team in any nursing program in the U.S. and Canada (excepting those states and territories where such contests are prohibited). First prize is one stuffed turkey. All entries must be postmarked no later than Christmas. Honorable mention will go to all teams of ten or more persons who can prove that an average of four or more hours per week per person (forty scheduled hours or one to two fulltime equivalent faculty) is consumed in group meetings and/or in sitting in class together."

Styles highlighted team teaching as one of a number of things in nursing education that I consider cumbersome and costly if used too much or inappropriately. Others that I would like to identify include:

a. Use of the group or team approach to make mechanical or delivery decisions that could be made by a team coordinator, secretary, or administrative assistant.

b. Use of teaching teams, planning groups, or committees by individuals or subgroups of faculty to meet personal and interpersonal needs rather than to accomplish the decisions and tasks associated with program delivery.

c. Continual and almost obsessive revision of curriculum.

d. Total group development of handouts, tests, and the like that could be more efficiently developed by one or two people.

e. Use of team approach to the extent that every individual on the team is lowered to a common denominator instead of being allowed to utilize his/her full and unique expertise.

f. The expectation by nursing faculty that someone will be assigned to the role of curriculum coordinator for ongoing curriculum revision and that faculty will be paid for extra time to revise curriculum and courses. What other department or major in that setting has a department head, a curriculum coordinator, a curriculum committee, a curriculum committee chairperson, and extra paid curriculum revision time for faculty?

g. Also, costly is the distribution of all materials such as minutes and reports to all people at tremendous cost instead of shared centrally located, or check-out resource copies. Certainly nursing education administrators are guilty in this area too.

h. The expectation that all faculty on a team must be present in class even when all persons are well oriented to the class content.

i. The expectation that an extra faculty member or student must go to a meeting, a clinical site, or other type of activity to "support" the other.

j. The escalation of nursing class time and assignments through the insidious addition of "extras." Each year in my setting some faculty team or member tries to add hours and preparation requirements for students that exceed the approved class or clinical time related to the allotted credit. The explanation is usually that "students need this." Students "need" a lot, but time and budget prevent us from giving them everything.

I do not want to leave you with the impression that I am anti-group, anti-curriculum revision, and anti-deliberative or democratic decision-making. We simply must be reasonable about these approaches in nursing education. Many of these activities are luxuries we could afford in the days of nursing capitation and federally funded curriculum projects. These behaviors cannot be defended to central administration and governing boards in times of tight budgets and cost containment.

Point seven is: Certain beliefs and practices in clinical education are perpetuated without supportive data. In times of financial problems and cost containment they will be challenged, and will be subject to change.

Student-teacher ratio in the clinical area is most protected in nursing education and most scrutinized when program costs containment is considered. In working with budgets it is very difficult to reduce costs unless personnel are reduced. Consequently, the reduction of faculty in nursing is often the first point of attack in cost containment efforts.

Ideal ratios of one faculty for every six to eight students in the clinical area are near impossible to defend in these tough budget times. Nursing education will do well to defend a one to ten ratio in the future, as financial distress in some institutions worsens. Some programs have already moved to a ratio of one faculty to as many as fifteen students. It is interesting to note that all of these programs still seem to be producing marketable products.

Nursing education administrators and faculty must research this area. Questions that cannot simply be answered philosophically are:

a. Is learning better in a 1 to 6 ratio than in a 1 to 10 or a 1 to 12 ratio?

b. What techniques can be used to facilitate the teacher's ability to work with more students?

c. Can paired students at advanced levels assist each other to facilitate the teacher dealing with more students?

d. What is the relationship between the teacher's experience, confidence level, and clinical competence, and the number of students she/he can teach at one time in the clinical area?

e. What collaborative models with nursing service will facilitate a larger student-teacher ratio?

f. Are we using directed study, interims, and cooperative education to their best advantage in nursing to enhance clinical education?

Another costly, time-consuming factor in clinical education is the frequent rotation of students within a course or academic period. Is this really essential or would learning be just as effective if students stayed in one clinical area for a longer time period? This factor also interacts with the student-teacher ratio and the amount of time needed in the clinical area.

Also, we should question the paper work associated with clinical education. Do students need to write as many logs, care plans, and med cards as faculty require? I doubt it. Several good learning experiences may be better than the flood of written materials that are sometimes plagiarized, poorly done, hurriedly corrected, and returned late to students.

Nursing faculty tend to resist these inquiries and reaffirm the need for a small student-teacher ratio. However, it will become increasingly necessary to consider these questions and the alternative patterns that they imply.

A review of the eighth point suggests that it relates to both points six and seven: There are unique features of nursing education that can be defended to academic administrators, governing boards, and legislators. There are other aspects of nursing education that faculty cite as unique that are not defendable to these individuals or groups.

It will be most fruitful in times of cost containment to focus on those things which are truly unique and important in nursing education. For example, we can argue, document, and demonstrate that clinical instruction is very stressful, physically demanding, is likely to contribute to faculty burnout, requires a high level of expertise and critical decision making in relationship to patient safety and well being, and is high risk with regard to professional and personal liability. These factors are not always fully understood and appreciated by academic administrators. There are ways this can be illustrated through logs, case data, discussions with nursing service representatives, and if necessary, demonstration visits by academic administrators to the clinical area.

Given the above, one can legitimately argue that nursing clinical laboratory and chemistry clinical laboratory cannot be simplistically equated. On the other hand, we should not try to defend the concept that team taught courses have to be accounted to each individual faculty member in terms of their full credit amount.

Recently, I heard a young nursing program chairperson describing how hard it was to convince her academic dean that an hour of nursing lecture requires more preparation time than an hour of English or history because the first changed regularly while the latter never changed. We will not win arguments like that in academe, and furthermore, we do not want the negative reaction that will come from other disciplines such as English or history when we view those areas so narrowly to enhance our own cause.

In times of cost containment we also will need realistic arguments for workload parameters, contact hours, and release time for research and clinical practice. Please do not misunderstand me I support reasonable workloads and adequate time for scholarly and clinical development. However, as we argue to attain or maintain certain standards we need to look at the patterns in other departments in our institutions.

Certainly our accomplished colleagues in other departments may have achieved some of their scholarly outcomes through research opportunities inherent in their roles. However, close examination of those colleagues' professional careers would likely show utilization of summers and leaves to further their scholarly pursuits. Further, many of these colleagues have prepared themselves at such a high level and committed themselves to academic careers to an extent that they <u>can command</u> institutional support. We must ask ourselves--have we done the same? Have we also prepared, dedicated, and committeed ourselves to academic excellence so that we can command similar support and opportunity?

Point nine leads to ideas about financial development as well as cost containment: There are financial development and cost containment approaches in nursing education with much potential that should be explored for their benefit in times of financial distress <u>and</u> for their potential to strengthen and broaden nursing education.

Time does not permit detailed individual discussion of these, but have we adequately explored the use of:

- shared audiovisual software and hardware?
- shared library resources?
- educational technology?
- clinical simulation?
- teleconferencing?
- senior students assisting freshman students?
- groupadvising?
- pooled seminars?
- paired clinical assignments?

- adjunct/joint appointments with other departments?
- adjunct/joint appointments with nursing service?
- organized volunteer efforts from emeritus faculty, retired persons, alumni?
- shared handouts, handbooks, workbooks, worksheets, clinical case materials, clinical evaluation forms?
- local expert versus outside consultants?
- visiting scholars instead of sending faculty to distant meetings?
- larger discussion and lecture groups?

In the area of program and financial development nursing education leaders will need to give more consideration in the future to:

- public relations
- alumni development
- regular alumni contacts
- fund raising
- deferred giving with friends of the program and alumni
- long range planning
- prioritization of needs and developments
- successive staged changes, rather than massive overall program revisions
- development of clinical practice units
- development of faculty practice reimbursement plans
- sophisticated selling of programs, products, and ideas.

I have focused quite heavily on faculty in my comments up to this point. Cost containment will penetrate administrative levels in nursing education too. As the recent emphasis on improving the quality of education moves from the public elementary and secondary schools to higher education, we can expect legislatures and governing boards to scrutinize institutions for ways to put scarce financial resources into teaching rather than administration and overhead. The concern in this area is underscored in a recent article by Peter F. Drucker (1983, p. 14) on the rapid growth of middle management.

> "....middle management has been exploding in the last few decades. In many companies the "middle" between the first-line supervisor and the corporate top has been growing three or four times faster than sales, even before adjustment of inflation.
>
> The growth has not been confined to big business. Thirty years ago the community hospital of 250 beds had an administrator, (often an elderly physician retired from practice) and a director of nursing. Now it also has three or four associate or assistant administrators, a comptroller and half a dozen "directors" of the medical lab, X-ray, physical therapy, food services, data processing, and so on. A liberal arts college I know had, in 1950, a president, a dean, an assistant dean of students who also handled admissions and a chief clerk who kept the books. Enrollment has doubled, from 500 to 1,000; but administrative staff has increased six-fold with three vice

presidents, four deans and 17 assistant deans and assistant vice presidents."

Although Drucker suggests that some of this growth has been healthy, it is, in large part, inflationary and will not and cannot continue. Attrition and expanded role responsibilities are seen by Drucker as ways this "midriff bulge," will be reduced. As we look at some of our own programs across the country, we recognize that Drucker is referring to and might well expect a contraction of middle management in nursing education such as he predicts for institutions in general.

I realize that I have not given you any clean formulas for cost containment in nursing education. Hopefully, however, I have presented you with some ideas and potential strategies that can be pursued further if needed.

References

Brown, Elsa L. and Lyons, John M. Analyzing the cost of baccalaureate nursing education. Pub. No. 15-1880. New York: National League for Nursing, 1982.

Davis, Carolyn K. Nursing and the health care debates. Image: the Journal of Nursing Scholarship, 15, 3, Summer 1983, p. 67.

Drucker, Peter F. Squeezing the firm's midriff bulge. The Wall Street Journal, Friday, March 25, 1983, p. 14.

Finn, Chester et al. Economics of higher education in nursing. Publication Series 83-No. 1. Washington, D.C.: American Association of Colleges of Nursing, 1983.

Ginsberg, Eli. The economics of health care and the future of nursing. The Journal of Nursing Administration, March 1981, pp. 28-32.

Lazinske, Harriet. The effects of clinical teaching on the budgets of schools of nursing. Journal of Nursing Education, 18, 1, January 1979, pp. 21-21.

National task force on education for nursing practice. Education for nursing practice in the context of the 1980's. Kansas City: American Nurses' Association, 1983.

Nelson, Glenn et al. Cost effective management of schools of nursing. Pub. No. 16-1897. New York: National League for Nursing, 1983.

Norby, Ronald B. et al. Cost containment. Oncology Nursing Forum, Summer 1980, 7, 3, pp. 27-34.

Spitzer, Roxanne B. and Grace, Helen K. Cost containment: Impact on nursing service and nursing education. The impact of changing resources on health policy. Kansas City: The American Academy of Nursing, ANA, 1981.

Styles, Margretta M. In the name of integration. Nursing Outlook, December 1976, 24, 12, pp. 738-744.

Quality, Cost, and Cost Containment

by Avedis Donabedian, MD, MPH

Health care professions today are caught between the opposing pulls of two implacable imperatives: to maintain quality and to contain cost. Ideally, it is to quality that we owe our allegiance; it is our first love, our peculiar mission, and our continuing consolation. But the demands for cutting costs have become increasingly more insistent and more skillfully orchestrated. At times, they appear to us as peremptory regulations that we must obey, or as a confrontation with hard realities to which we must bow.

At other times the demands to cut costs enter clothed in more seductive garb, perhaps with an appeal to seemingly higher values, or an invitation to an allegedly superior social order. When, unsure how to respond, we plead a commitment to each of our patients individually, we are reminded of our responsibilities to society in the aggregate. And when we point to the special needs of the unfortunate or disadvantaged in our midst, we are shown seductive images of the utopian society which free competition will surely accomplish for all.

My purpose today is to cut a clearing in this thicket of contraries, to open at least a small space in which we can take refuge to enable us to collect our thoughts, consult one another, and decide what we are to do.

As always in such circumstances, it seems that we must go to fundamentals, assembling the conceptual and moral components of our position piece by piece. Accordingly, we must first say what we mean by "the quality of health care" and then see how monetary cost pertains to that definition.

First, the quality of health care depends on the choice of the appropriate objectives of care and, then on the selection of the appropriate means for attaining these objectives. Figure one presents this primeval field, as yet unadorned by knowledge and unsullied by error or presumption. What are we to place on the ordinate? and on the abscissa? How are we to relate one to the other?

The objective of health care is, of course, health. More precisely, it is an <u>improvement</u> in current health, and in future prospects of health, <u>attributable</u> to antecedent or concurrent health care.

It follows that the choice of what is to be included or excluded from the domain of "health" is a primary determinant of the definition of quality itself. I will not elaborate on this theme beyond saying that the health care professions must determine, in general terms, the aspects of health for which they are legitimately responsible. More particularly, for each individual patient in any specific situation, the health care practitioner and the fully informed client must make a joint decision as to what amount of improvement in what aspects of health are both feasible and desirable.

The means for achieving this objective are a particular strategy of care which the practitioner devises taking into account the capabilities of the science of health care, as well as the circumstances and wishes of the client. Thus, the strategy to be implemented jointly by the client and practitioner is regarded as having at least two components: one technical and the other interpersonal. I call it a "strategy" because it is a plan for action--a plan guided by rules that govern the kind, amount, and sequence of the many elements of care that are its parts.

The relationship between the strategies of care and their objectives is critical to both the specification of quality and the pertinence of monetary cost to that specification. In order to explore this relationship I invite you to accompany me on a journey into the abstract which may, at first, appear irrelevant.

To begin, let us assume that we have a specific patient with a specific problem. We also have an "ideal practitioner," one who knows all that there is to know about the science of health care and also, about the prices of health care services. This practitioner is given a sum of money and asked to devise a strategy of care calculated to produce the greatest improvement in health under the circumstances. The cost of the strategy and the health improvement it produces are entered in the field bounded by the Cartesian coordinates in Figure 1.

If we repeat this procedure, providing our "ideal practitioner" successively larger sums of money with which to work, we are able to plot a graph (Figure 2). The ordinate of the graph shows improvements in health. The abscissa shows the monetary cost of successively more effective strategies of health care. Though we do not know the actual shape (or shapes) of this curve, we assume that it has the shape shown because one expects "diminishing returns;" as one adds increments of cost, one gets smaller and smaller added improvements in health.

Finally, there comes a point when a proposed addition in cost will not bring about any further improvement in health. At this point, the "ideal practitioner" will simply refuse to continue to play our game. This is because, by our own definition, the ideal practitioner uses the least costly strategy to obtain any specific improvement in health. It follows, the prices of services being what they are, that the strategy S_1 represents the highest quality of care because it is the course of action most likely to produce the highest improvement in health at lowest cost. All less costly strategies represent correspondingly lower levels of quality because they are more likely to produce smaller improvements in health.

The relationship between the cost of the strategies of care and their effectiveness, the prices of services being what they are, will be called "clinical efficiency." But the services that the ideal practitioner helps select, combine, sequence, and implement can themselves be produced at lower prices. The extent to which this is done will be referred to as "production efficiency."

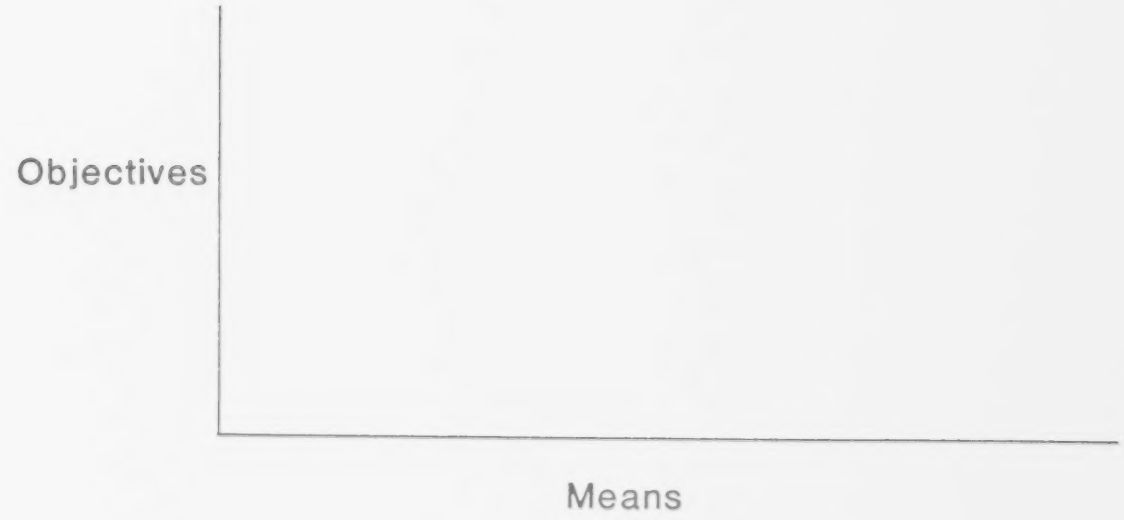


FIGURE 1.

Cartesian coordinates for showing
the relationship between
the means and objectives of health care

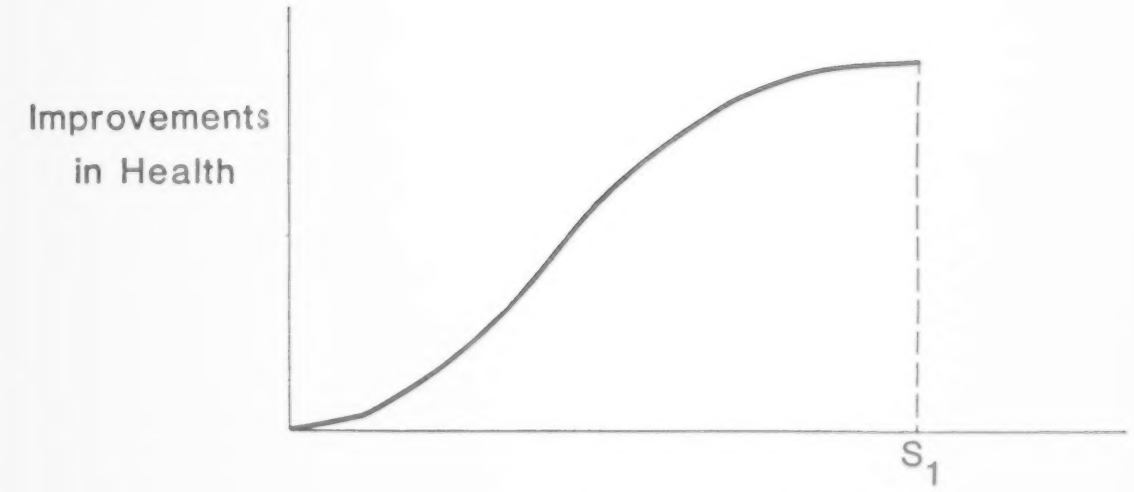


FIGURE 2.

A hypothetical relation between the monetary cost of successively more effective strategies of health care and the improvements in health attributed to these strategies as implemented by an "ideal practitioner".

Improvements in production efficiency would lower prices, for example, by better scheduling, automation, or more appropriate allocation of responsibilities among the members of a health care team. As a result, every level of quality shown in Figure 2 could be achieved at a lower cost.

Figure 3 shows this relationship by portraying the performance of our hypothetically ideal practitioner at current levels of production efficiency (the solid line), and after improvements in production efficiency (the interrupted line). Notice that after this improvement, the cost of the strategy that represents the highest attainable level of quality has been reduced from S_1 to S_2.

Let us now move on to a more realistic picture of clinical practice by introducing an "average practitioner" who also is presumed to participate in the experiment previously undertaken by our ideal practitioner. Figure 4 shows the comparison of the two.

The average practitioner is postulated to practice at a lower level of "clinical efficiency" because of a less perfect knowledge of the science and "art" of health care, on the one hand, and of the prices of services on the other. As a result, the average practitioner (whose performance is shown by the interrupted curve in Figure 4) is different from the ideal practitioner in two ways: (1) in using more money to achieve any given level of quality; and (2) in never attaining the highest level of improvement in health that the health care sciences would permit.

It is clear that by improving clinical efficiency one can reduce the cost of the highest level of quality attained by the average practitioner from S_3 to S_4 in Figure 4. At the same time, however, one would need to add to the cost of care (moving from S_4 to S_1 in the Figure) if one wanted to raise the quality of care to the highest level currently attainable.

We have now arrived at a conclusion of fundamental importance, though it is one that we knew all along. Quality monitoring, if it is followed by corrective action, can reduce the cost of care by eliminating useless or potentially harmful care. However, it can also add to the cost of care by helping correct the discrepancy between current performance and the higher levels of quality to which we all aspire.

Thus, quality monitoring, besides being costly in itself, has two additional potential effects, one cost-generating and the other cost-saving. Seeing the current emphasis on cost containment, it is remarkable how little we actually know about the relative magnitudes of these two potential effects under different circumstances. One of our more urgent responsibilities is to find out.

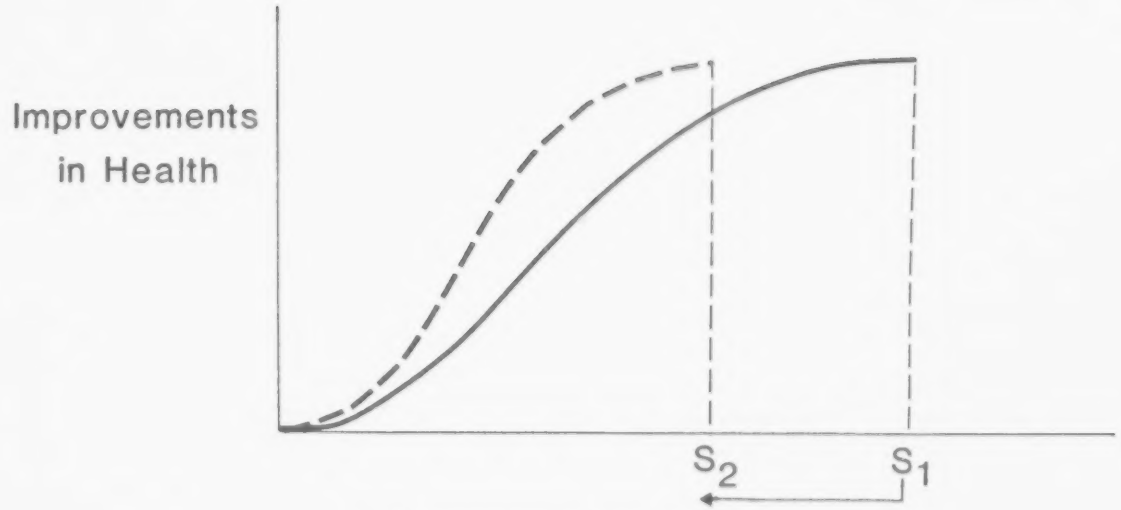


FIGURE 3.

A hypothetical relation between the monetary cost of successively more effective strategies of health care and the improvements in health attributed to these strategies as implemented by an "ideal practitioner", before and after improvements in "production efficiency".

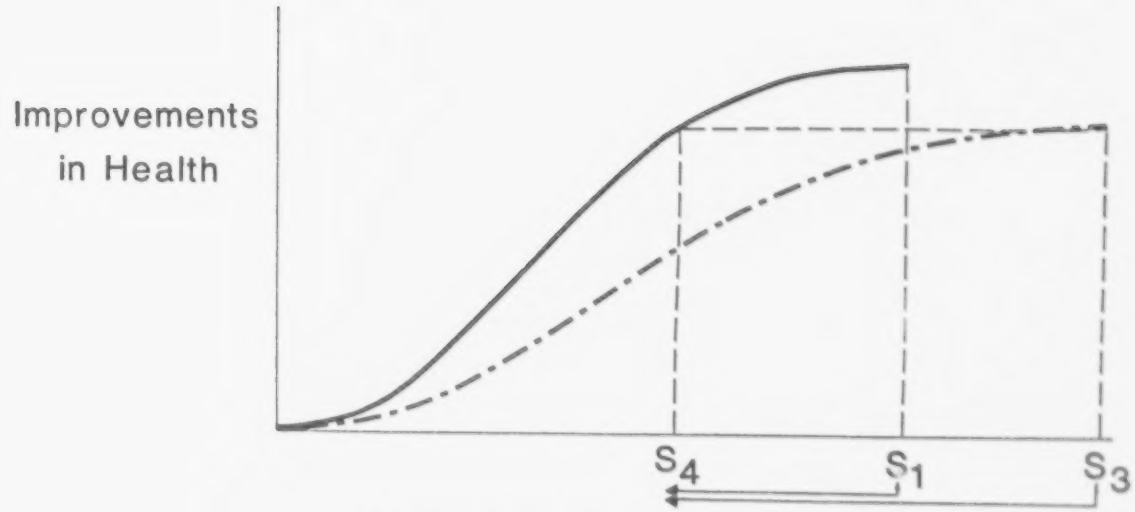


FIGURE 4.

A hypothetical relation between the monetary cost of successively more effective strategies of health care and the improvements in health attributed to these strategies as implemented by an "ideal practitioner" and an "average practitioner", respectively.

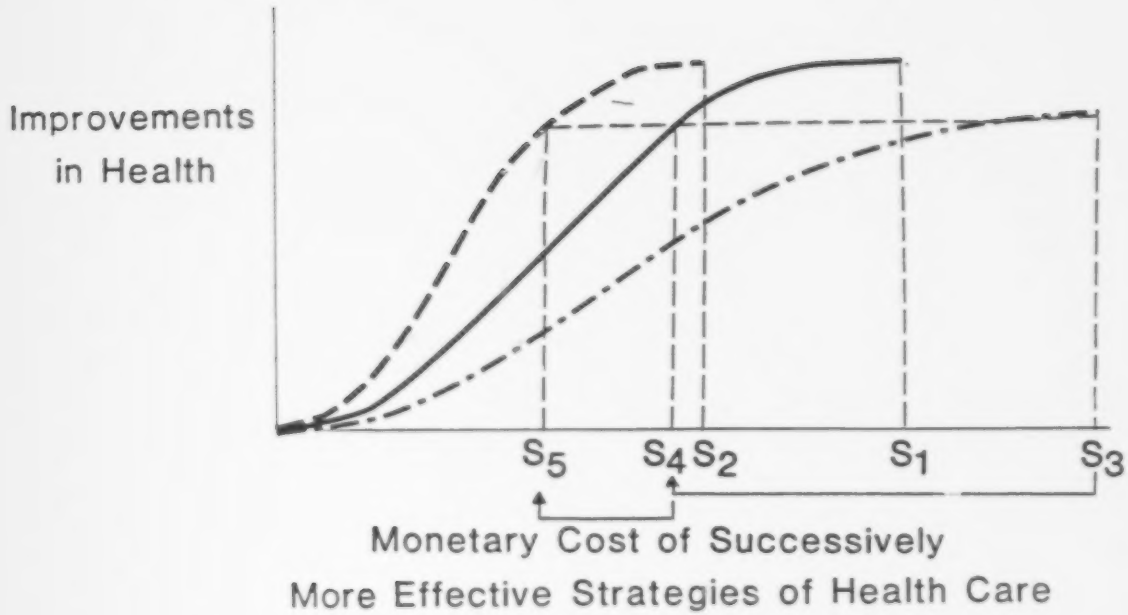
As previously indicated, and as Figure 5 again demonstrates, further reductions in cost are possible, without injury to quality, by improvements in production efficiency. But production efficiency is largely an administrative matter. It enters the domain of quality only when health care professionals, legitimately or otherwise, insist on modes of production that are less than the most efficient. Our responsibility here is to collaborate actively in improving productivity, undeterred by narrow self-interest or unreasoning commitment to established forms, but at the same time being careful in no way to expose our patients to avoidable risk.

So far, it has been demonstrated that the goals of quality assurance and cost containment are congruent to the extent that improvements in clinical efficiency reduce cost without injury to quality. There is conflict, however, to the extent that raising the level of quality calls for additional costs. But this conflict would itself be resolved if we could show that better care now would yield the economic benefits of better health and a reduction in subsequent expenditures on health care.

There is another development, however, which raises problems of professional ethics that border on the insoluble. In order to explore this more sinister domain, I must offer you yet another model (Figure 6). We have returned now to the performance of our hypothetical ideal practitioner. The abscissa still shows the monetary cost of successively more effective strategies of care. But there is something new on the ordinate; it shows not improvements in health, but the monetary value placed on such improvements. The solid curve still depicts the performance of the ideal practitioner at the highest level of clinical efficiency, but without additional consideration to the cost of care.

Let us now assume (as was true in most cases, not so long ago) that the patient bears all the costs of care and reaps all the benefits. It is clear that under these circumstances the cost of care must be substracted from the monetary value of its benefits. As a result, as shown by the interrupted curve in Figure 6, there is a strategy of care, S_6, beyond which the added costs are not worth the added improvements in health. In this way we have arrived at a new specification of the highest attainable level of quality. This is so because a development of the greatest importance has taken place: monetary cost has now entered the definition of quality itself. There is now a trade-off between cost and improvements in health.

This intrusion, though unwelcome, is both necessary and legitimate. It leads, however, to issues of horrendous complexity. Note, first, that we cannot conceive of the relationships shown in Figure 6, let alone quantify them, without placing a monetary value on human life and well-being. Are we prepared to do this and, if so, what values are we to adopt? Then notice that by including monetary cost in the definition of quality we have implied that quality varies according to ability to pay. Starkly stated, there is one kind of quality for the poor and another for the rich.



S_3-S_4=Cost Reduction Due to Improved "Clinical Efficiency"

S_4-S_5=Cost Reduction Due to Improved "Production Efficiency"

S_1-S_4=Added Cost Due to Raising the Level of Quality

FIGURE 5.

A hypothetical relation between the monetary cost
of successively more effective strategies of health care
and the improvements in health attributed to these strategies
as implemented by an "ideal practitioner"
and an "average practitioner"
before and after improvements in "production efficiency".

(Curves as in Figures 2, 3 and 4.)

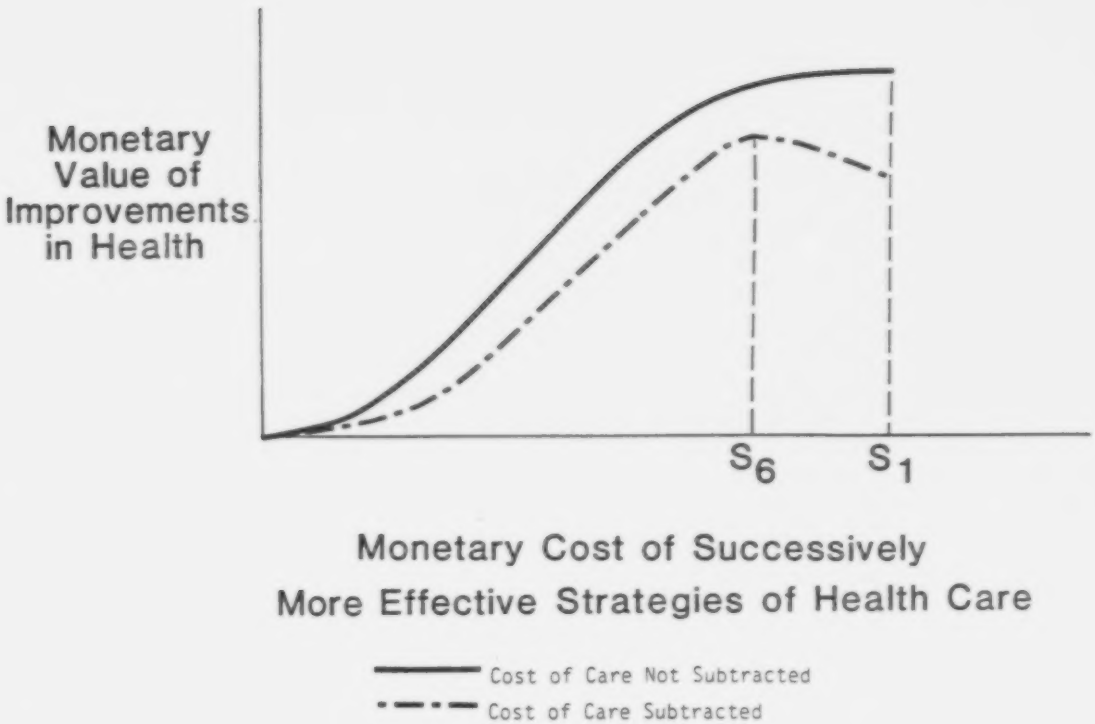

Monetary Value of Improvements in Health
S_6
S_1
Monetary Cost of Successively More Effective Strategies of Health Care
Cost of Care Not Subtracted
Cost of Care Subtracted

FIGURE 6.

A hypothetical relation between the monetary cost of successively more effective strategies of health care and the improvements in health care attributed to these strategies as implemented by an "ideal practitioner", with and without subtracting the cost of care from the value of the improvements in health.

There are some who are not bothered by this disparity --some who, in fact, have advocated a "two-tier system" of health care, with only a "decent minimum" assured to the poor. There are others who continue to support the growth of public and private programs for financing health care, so that disparities in the optimal levels of quality should continue to narrow. But the assumption of societal responsibility for financing health care has itself created a new ethical problem. This is because consumers, to the extent that they do not pay directly for the cost of health care, have aspired to a higher level of quality, closer to S_1 in Figure 6.

By contrast, as the cost of health care has risen relative to its benefits, and relative to the real or presumed benefits of competing enterprises, society (which now bears more of the cost of health care) has tended to adopt a correspondingly more modest standard of quality, one closer to S_6 in Figure 6.

There are yet other considerations that produce disparities between the social and individualized definitions of quality, considerations that cannot be discussed because time is short. It is not enough to know that their joint impact is to widen the gap between what individuals want and what society is prepared to provide. We, as health care practitioners, are vitally involved in this confrontation; we are expected, in conformity to our noblest traditions, to serve the best interest of each of our patients individually while, increasingly, we are also pressed to serve society as custodians of its precious resources. Can we in all honesty, accept both responsibilities? If not, how are we to respond?

There is insufficient time to explore fully the ways in which the many proposals for quality assurance and cost containment bear upon the ethical dilemma described. It is important to note something, nevertheless, about two approaches to limiting the escalation in costs: competition, and controls on reimbursement.

The proposals for introducing a greater degree of competition into the working of the health care market are so diverse that one cannot easily summarize their possible effects on the quality of care. It is true, however, that individuals will settle for less care when they are required to pay more of its cost. In this way, practitioners are less pressured to take the initiative in imposing the cuts that society wishes to make. But we need to remember that the burden which we seem to have shaken off now has settled upon our patients, and that they bear it unequally, unless it is adjusted to ability to pay, to the severity and duration of illness, and perhaps, to other factors as well.

We cannot stand by idly while different people receive different qualities of care, even if they are forced by economic necessity to acquiesce to the inequity. Besides, if competition is to re-establish consumer sovereignty in the health care market, which its advocates would have us believe it can, the consumer would have to be given accurate information about both quality and price, so that a properly informed choice might be

made. Thus, the reliance on competition to regulate the production and distribution of health care requires that quality be monitored even more assiduously than now, and that the information be known by both the producers and consumers of care.

After a brief flirtation with pro-competition approaches to containing the costs of care, we seem now to be turning to regulation once more, particularly in altering the methods of reimbursement and imposing more direct control on prices. Payment by Diagnosis Related Groups (DRGs) is an undisguised manifestation of this approach. The advocacy for health maintenance organizations is a more subtle and complex example.

It seems to me that under any circumstances, a method of reimbursement that allows a practitioner to derive a direct financial benefit from providing less care would be morally reprehensible. It is true, however, that the judicious imposition of financial limits may spur practitioners and administrators to collaborate in improving the efficiencies of practice and production, reducing costs without harm to quality. But these same limits on reimbursement, by having an indiscriminate effect, or by exceeding certain boundaries, also could lower the quality of care. We find, once again, that cost containment cries for quality monitoring--and that the two are an inseparable pair.

In the final analysis, there is no substitute to professional commitment and accountability. Without these the most ingenious devices of public policy will come to nothing. It is we who must lead, rather than follow, in collaborative efforts to improve the efficiency of production, irrespective of sectarian interests, but ever mindful of the patient's welfare. More particularly, it is we who must discharge our unique responsibility for reducing costs through improvements in clinical efficiency.

At the same time, it is we--we, above all--who must champion improvements in quality even at higher cost. Because the cost-saving purposes of quality monitoring have so many partisans, while its cost-generating consequences have so few, we must refuse to accept responsibility for the one without a stewardship over the other. To protect and improve the quality of care must always remain our highest, our most particular, mission.

References

Donabedian, A. Wheeler, J.R.C., & Wyszewianski, L. Quality, cost, and health: an integrative model. Medical Care, October 1982, 20, 10, pp. 975-992.

Donabedian, A. Quality, cost, and clinical decisions. The Annals of the American Academy of Political and Social Science, July 1983, 468, pp. 196-204.

Wyszewianski, L., Wheeler, J.R.C. & Donabedian, A. Market-oriented cost containment strategies and quality of care. Health and Society, Fall 1982, 60, 4, pp. 518-550.

Continuing Education/Staff Development: Cost Containment Strategies

by Beverly A. Freeman, RN, MSN
Patricia Dolphin, RN, MS

Consortium Mode

Continuing Education (CE) is an essential component of Quality Assurance (QA) programs in all health care organizations. It has everything to do with the current knowledge of primary care providers who establish standards of practice and patient outcomes in an institution, as well as those specific actions needed to correct deviations from established standards.

The major problems in the health care industry which have given impetus to QA are related to accessibility, quality, quantity, and cost. CE, as an essential component of an organization's assurance program, must reflect these characteristics as well.

In the last five years, the nursing profession has faced "famine," drought," and "threat of fire". The shortage of nurses spawned significant studies, namely the Institute of Medicine's **Nursing and Nursing Education: Public Policies and Private Actions Report**, the National Commission on Nursing's **Summary Report and Recommendations**, and the American Academy of Nursing's report on **Magnet Hospitals: Attraction and Retention of Professional Nurses**. All of these reports highlighted the philosophical and programmatic importance of an institutional commitment to continued development of professional nurses.

The subsequent economic recession, or drought, found hospitals with a reduction in bed occupancy and revenue base. Community health agencies continued to care for the same client population, but that client was no longer able to pay at the same level of cost. The base salary of professional nurses in most areas of the county reached a level commensurate to the professional services provided. The nurse shortage disappeared and the "Baylor Plan", (full pay for 24 hours worked on weekends), bonuses, and moving expenses were discontinued. Other benefits for these previously hard-to-fill nurse positions were scrutinized, including the continuing education budget allocation.

Now we are preparing for the prospective reimbursement program, or threat of fire. The cost and benefit ratios of our CE Programs for professional nurse development must at least balance, although a savings would increase the credibility of the top nurse administrator.

Prior to these three significant events in the history of nursing, and on the heels of the QA impact in health care organizations, the Nursing Administrators in Oklahoma's Health Sciences Center made a decision about CE which initiated a unique consortium model. These Nursing Administrators

from federal, state, and private health institutions located in the Health Sciences Center wished to formalize their collaborative and cooperative relationship.

In March 1978, nursing administrators from the Veterans Administration Medical Center, University of Oklahoma College of Nursing, University Hospital and Clinics (adult), Oklahoma Children's Memorial Hospital and Presbyterian Hospital determined that the aggregate would meet on a monthly basis as the Health Sciences Center Nursing Administrators Group (HSCNA). In 1979, the Oklahoma State Health Department, Nursing Division, joined, and in 1980 the O'Donohue Rehabilitation Institue completed the Health Sciences Center membership.

The primary purpose of the HSCNA was to advance the quality of nursing care and practice in the Health Sciences Center through sharing of educational, administrative, clinical, and research resources which are mutually and collectively beneficial.

In the Spring, 1978, the nurse administrators took the first action in implementing the goal of the group by establishing a Continuing Education Consortium. It was a plan to pool financial resources and bring nationally recognized speakers to the Health Sciences Center throughout the year which would achieve what no single institution could do alone.

Each hospital committed fiscal support for one of the four annual CE programs and the College of Nursing insured program coordination, space, publicity, and awarding of CE credit. The programs were to be based on needs assessments of all registered nurses in the Health Sciences Center and open to them without tuition.

A Continuing Education Liaison Committee was appointed to develop and coordinate the program offerings. The members of the committee were the Director, Continuing Education, University of Oklahoma College of Nursing and the Directors of Nursing Education at the four service agencies.

The functions of the committee are to select program topics and speakers; contact speakers and schedule presentations; develop program objectives, format, and evaluation tools; plan program arrangements and publicity activities; and provide summary evaluation and an attendance record of each offering to the HSCNA.

In order to assure accessibility, quality, quantity, and cost-effectiveness in the CE Consortium model, the following quidelines were adopted:

- One continuing education offering consists of a program repeated on two consecutive days or a twoday program which is not sequentiallly dependent.
- Each service agency provides approximately $1,500 for the honorarium and expenses of one speaker annually.

- College of Nursing provides meeting room space, publicity, and award of CE units.

- Programs are offered for all nurses in the Health Sciences Center without tuition or gratuity for any materials distributed.

- Program announcements are not sent to agencies outside the Health Sciences Center, but attendance of nurses from those institutions may be approved if space permits.

- Program format and arrangements for each offering are planned and implemented through shared responsibility by all CE Liaison Committee members.

- The largest lecture room available will be scheduled and an equitable number of spaces will be allocated for nurses from each sponsoring agency. Preregistration with deadlines will be established. Unused seating after registration deadlines will be given on a "first come, first serve" basis to any nurse in the Health Science Center.

Four continuing education programs have been offered annually since the Consortium was established. The average attendance for the last four programs was 200 at a cost of $10.36 per person. Program evaluations verify that learning needs of the target group were met and that participants outside the Health Sciences Center would like their institutions to adopt such a model.

The offerings have been a major source of professional growth for nurses in practice on the Campus. Nurses value the commitment of administrators to the development of registered nurses and the conducive environment in which they practice. The success of this CE Consortium Model is the result of: total support from the top nurse administrators; education and service working together; and release time at the unit level for attendance at program offerings.

Collaboration is one way to reduce the cost of presenting continuing education and fostering the growth and development of the nursing staff. Contracting for services is another method employers can use to get the most for their continuing education dollars.

The "In-House" or Inservice Education Program is one of two approaches traditionally used by employers to provide staff with learning opportunities. Development and support of a full blown education department is akin to supporting a mini-school or college within the service setting, and entails employment of highly skilled professional educators and/or the costly training, orientation, and perhaps, replacement of trainers/instructors.

Employers also provide continuing education to employees by underwriting enrollment of learners in continuing education offerings presented by private entrepreneurs or public institutions.

Professional providers allocate about half their planning budgets for faculty expenses, learning materials, and other costs related to curriculum development and implementation. Administrative costs and overhead account for another quarter of the education expenditure. Finally, 25 percent (or more) of the operating budget is earmarked for marketing such as design and printing of brochures, production or purchase of mailing labels, postage, and advertising. Marketing costs, along with other budget items, are passed on to the consumer as part of the registration fee for individual offerings. The administrator enrolling staff in conventional continuing education offerings must often, in addition to the registration fee, reimburse staff for travel expenses.

Contracting for continuing education with an experienced provider can eliminate some of the orientation/turnover costs of maintaining in-house programs, and marketing and travel costs engendered by enrollment of staff in traditional offerings. The employer who contracts for services can expect to realize some significant dollar savings by eliminating these expense items and by bringing the offering to the learner rather than sending the learners to the offering. Moreover, the purchaser is able to specify exactly what content is desired and when and where the content is to be presented. This means that learning experiences are tailored to the needs and convenience of the purchaser.

Long-Term Contracts

An employing institution or group of institutions may wish to purchase continuing education services over an extended period of time; usually the fiscal year. Services purchased are related to the needs of the buyer and may range from presentation of a minimum number of specific offerings to consultation and long-range planning of institutional staff development programs.

The Continuing Education Program of the University of Oklahoma College of Nursing is presently contracted to provide continuing education to nurses employed in eight unit areas of the Indian Health Service in Oklahoma. The Program provides learning needs assessment of the target population, curriculum design, presentation of offerings designed to meet identified needs, evaluation of each offering, and credit to successful learners.

Offerings are presented throughout the state as requested by the employer. A fee which encompasses faculty expenses, learning materials, meals and/or refreshments, and administrative costs is charged for each presentation. Funds budgeted for the contract may also be used for consultation in continuing education or to enroll individual nurses in workshops

presented by the Continuing Education Program for the general nursing community.

Short-Term Contracts

A short-term contract calling for presentation of one or two offerings or other limited continuing education service also can be used by employers to cut costs of staff development. Portable Programs have been used by the Continuing Education Program to provide this option to agencies in Oklahoma for over five years. A Portable Program is a workshop package which can be purchased by an institution or group of institutions for presentation to their employees at a time and place of their choosing.

The fee for a Portable Program is related to faculty honoraria and travel expenses and thus is negotiated on an individual basis with each purchaser. Fees include enrollment of up to 30 learners, all learning materials, credit for successful learners, evaluation of the offering, and maintenance of appropriate records and student transcripts. Fees do not include the cost of refreshments, meals, or rental of a meeting site. An additional fee is charged for each enrollment exceeding thirty registrations. Since Portable Programs were designed to provide employers with cost-effective continuing education rather than the opportunity to become an entrepreneur, purchasers are prohibited from attempting to realize a "profit" by reselling registrations.

At present the Continuing Education Program maintains a catalog of 20 offerings available as Portable Programs; offerings that cover topics ranging from management theory to drug therapy. Additional topics are added to the list at the request of prospective purchasers. Portable Programs have been presented in three states over the past years with consistent success. Purchasers have included large hospitals on military installations (one workshop was conducted in an NCO Club) as well as a coalition of two small hospitals located in a rural area who shared the expense of buying an offering. Evaluations have been consistently positive and purchasers have declared themselves satisfied with the concept and the product.

A comparison of per learner costs makes apparent the dollar benefits to the buyer of contracting for continuing education services. At present, the average registration fee for a one-day workshop presented by the Continuing Education Program is $50 per person. This sum does not, of course, include travel expenses for out-of-town enrollees. To date per learner costs of participants in the long-term contract cited are about $33 while purchasers of Portable Programs spent about $22 for each enrollment in 1982-83.

Selecting a Provider

Administrators considering collaborating or contracting for continuing education services are advised to carefully review the credentials of a

provider before making a decision. Basically, the purchaser is buying expertise and must look for evidence that the expertise exists.

In general, the buyer should look for an established provider with resources adequate to the task and a track record of success in the field. It is well to avoid newly established programs or companies, especially in states with mandatory continuing education requirements for nurse re-licensure. Frequently the mandate for continuing education is accompanied by a boom in the establishment of continuing education corporations; some of which are headed by well-intentioned, but inexperienced entrepreneurs, and others of the "fly-by-night" variety of enterprise. Purchase of services from a provider with less than two years of experience in continuing education is not recommended.

Accreditation as a provider of continuing education by the American Nurses' Association indicates that the provider has met criteria reflecting high standards of quality of continuing education. In addition, credit awarded by accredited providers is usually readily accepted by licensing bodies and professional organizations. If the provider is not accredited the contract should specify that all offerings must be approved for continuing education credit by the appropriate state nurses' association and/or licensing board.

The consumer is urged to ask prospective providers to bid for the contract by providing a listing of specific services offered, fees for the services, and references from past learners and purchasers. Programs based in institutions of higher education may be subsidized to an extent in terms of indirect expenses. The public provider who does not have to recoup the costs of utilities or space may be able to hold fees at a lower level than an entrepreneur who must generate income to cover office rental and telephone bills. The private entrepreneur is spurred by a profit motive generally absent in government supported agencies. On the other hand, the private corporation may be able to offer greater flexibility in services than the provider governed by institutional policies and procedures.

Contracting and Collaboration: A Mutual Boon

Contracting and collaboration strategies are a boon to provider and consumer alike. The consumer is able to use educational funds in a cost effective manner. The educator/provider is better able to make long-range plans confident that a market for the educational offerings is secured. Indeed, both parties benefit when the educator is able to spend time formerly used to publicize offerings in activities which foster high quality in educational experiences.

The demand among health care professionals for offerings which effectively meet learning needs will grow in the coming months and years. At the same time the pressure to provide these experiences in an economical and effective manner will rise. Administrators and educators can meet these challenges by studying the target population and its needs carefully and then using creative and collaborative approaches that are not necessarily in the traditional mold.

Developing Productivity Standards in Nursing

by Thomas W. Lant, RN, PhD
and Mary G. Nash, RN, MS

In January 1980 Sinai Hospital of Detroit, Michigan began re-evaluating its nursing services. At that time there were 265 budgeted registered nurse (RN) positions for the 607 inpatient hospital beds. Of those 265 positions, there existed 60 vacancies. Thirty-seven percent of the nursing staff were registered nurses, thirty-four percent were licensed practical nurses (LPNs) and fourteen percent were nurse assistants. The remaining 15 percent were unit clerks and/or general service employees. One thing clearly was apparent; the emphasis of the hospital had been on utilizing licensed practical nurses in a similar category as professional registered nurses to the point that at the unit level people were classified as either licensed or unlicensed.

Also, Sinai Hospital was very much aware that health care dollars would be decreasing. We faced a real dilemma - an inadequate number of RNs and an overabundance of LPNs if we were going to create a professional model of practice. To improve our quality of care we identified three essential issues:

- Increase the number of registered nurses;
- Decrease the number of licensed practical nurses; and
- Evaluate our hours of patient care per day.

Because of the impact of the anticipated economic situation, a decision was made early on to focus on solid management tools that would allow evaluation of standards and productivity.

When we speak in terms of productivity, we are really talking about the creation of a value we place against performance on a total number of products or activities. We began, then, with four objectives:

- To determine our historical and current hours of care per patient day;
- To develop a data base to be used in implementation of a patient classification system;
- To identify current procedures used in nursing; and
- To document the percentage of time the nursing staff spends in various activities.

Our next step was to develop a patient classification system, establish care hours standards, and implement a reporting system. Once we had implemented our patient classification system for 18 months, we were able to establish mean operating levels and expected variances.

This led us to two major concerns. First, there was a significant and consistent variance in current earned, worked, and budgeted hours. Second, there had not been an assessment of the changes in patient care resulting from nurse staffing and care approach modifications.

Focus here is on patient care modifications as they relate to productivity and cost efficiency. Our nursing managers spoke in terms of cost efficiency rather than cost effectiveness. As a profession, we need to begin focusing on our efficiency as a means to establish competency and professional worth compared to other health care providers.

When we began the third phase of our project, our goals were:

- To determine utilization of nursing staff in various patient care and related activities;
- To relate this new information to previously documented studies and changes in care approaches and staffing levels; and
- To review and validate labor standards presently used for workload and labor performance evaluations.

Review of nursing activities was accomplished by direct observation (using 48 consecutive hours of data for each nursing situation). The approach to reviewing current labor standards was a critical examination of current staff operations levels, budgeted staff levels, and staff earned hours. Attempts were made to factor average census and average acuity by specialty areas, and reduce incongruencies between the levels stated previously and nursing management's clinical judgement of appropriate care levels. It is important to emphasize that when working with a management engineering service that the component of nursing managers' clinical judgement, although subjective, be built into data as necessary.

In the collection of all our data our results clearly have indicated that there has been a significant change in our productivity of professional nursing care delivery based on changing our model of practice. We have not yet empirically determined quality, but subjectively our results are overwhelmingly positive. As I mentioned earlier, we would be looking at patient care approaches practiced in hospitals today. Our nursing practice at Sinai Hospital of Detroit has been progressive in approaches to provide quality patient care with increasingly diminished resource dollars.

In 1980 all of the practice could be categorized as team nursing. We define team nursing as a concept that revolves around functional assignments utilizing licensed practical nurses as coordinators of care. In 1980 our results indicated that 34 percent of our total nursing hours were spent at the patient bedside. This was consistent with other studies under team nursing. Harold E. Smalley reported a study with direct care values of 41

percent, 28, percent and 35 percent for registered nurses, licensed practical nurses, and nurse assistants respectively.

Since 1980 we have implemented two other nursing modalities: total patient care and primary nursing care. Our RN direct care on our primary nursing unit increased by 69.4 percent with a decrease in salary dollar per patient day for staffing by $5.48 per day. Since this is the main thrust of my presentation, I want to emphasize this fact before we go to the data and begin reviewing our study. In 1980 our salary dollars per patient day on Unit 64, a general medical floor, were $41.72. In 1982, on that same floor under a primary nursing model with a 70 percent RN staff, care costs have been reduced by $5.48 and direct RN care to patients had been increased 69.4 percent.

Sinai believes this study documents the premise that increasing registered nurse staff will increase productivity and reduce cost. The staff is in the process of reduplicating this study on all of our nursing units as we implement primary nursing throughout the hospital.

Table 1 and 2 provide comparisons using four different methods. The first is Percentage Breakdown of All Care Given. This breakdown by activity includes all nursing unit staff except the Unit Clerk. A test for significant change was developed based on total observations, frequency of occurrence, reliability, and confidence limits. An appropriate example is Surgical Unit comparisons for Personal Time (P). The change between 1980 (17.8) and 1982 (21.8) on Unit 27 is a significant change, whereas the change between 1980 and 1982 on Unit 28 is not (20.1). That is, it can be said we are 99 percent confident the 1980 true value is between 16.28 and 19.34. We are also 99 percent confident that Unit 28 true value is betweeen 17.86 and 22.34. Because these two ranges overlap (both could have a value of 18.00), we cannot say there has been a change in Personal Time for Unit 28. Other significant changes are as follows:

Unit 27	Unit 28	Unit 64	Unit 74
Administrative (-)	Service (-)	Direct Care (+)	Indirect (-)
Service (-)		Administrative (+)	Medication (+)
Personal (+)		Service (-)	Administrative (+)
		Personal (-)	Service (-)

Unit-to-unit comparisons for all staff indicate differences exist between Unit 64 and 74 in several categories, particularly Direct Care, Indirect Care, and Personal Time. In general, there is no significant change in the way the entire unit is spending their time, when compared to the 1980 survey.

The second comparison provided on Tables 1 and 2 is Percentage Breakdown of RN Care. This breakdown includes only Registered Nurses and Graduate Nurses. It represents the way RN's spend their time while on the patient unit. It was stated earlier that the entire unit has not changed

DEFINITIONS

Sinai Hospital of Detroit
PATIENT CARE STUDY

DIRECT CARE: Direct contact with patient or family (talking with, taking vitals,...)
Examples:
- Direct patient care, (physical contact).
- Interacting with patient and/or family.
- Assisting doctor or aiding.

INDIRECT CARE: Activities outside of patient room without contact with patient that affects patient care.
Examples:
- Formal reporting.
- Nursing documentation.
- Informal exchange of information on patients.
- Other indirect care.
- Phone.

MEDICATION CARE: Both scheduled and non-scheduled preparation and administration of medication.
Examples :
- Medication preparation.
- Medication administration.

ADMINISTRATIVE/PERSONNEL: Any activity which affects (directly or indirectly) the operation of the nursing unit.
Examples:
- Unit operations.
- Conferences, training.

PERSONAL TIME: Break times, non-productive time.
Examples:
- Scheduled personal time.
- Unscheduled personal time.

SERVICES: Non-clinical duties being performed by Nursing.
Examples:
- Dietary
- Housekeeping
- Accounting & upkeep of supplies.
- Off unit - with patient.
- Off unit - without patient.

EXTRAORDINARY: Non-normal operations.
Examples:
- Emergency patient care.
- Fire.
- etc.

MES:WS/eu
10/28/82

Table 1

SURGERY UNITS

PERCENTAGE BREAKDOWN OF ALL CARE GIVEN

	D	I	M	A	S	P
1980 All	23.8	39.1	6.1	5.5	7.7	17.8
1982 27	26.2	39.3	7.9	2.6	1.7	21.8
1982 28	23.8	41.2	8.4	5.0	1.5	20.1

PERCENTAGE BREAKDOWN OF RN CARE

						TOTAL
1980 All	18.9	50.3	7.0	4.9	3.9	15.0	100%
1982 27	27.8	42.2	7.4	0.8	1.7	20.1	100%
1982 28	23.2	45.1	10.9	3.8	1.3	15.7	100%

PERCENTAGE RN CARE OUT OF % CARE GIVEN

1980 All	28.1	45.5	40.8	31.4	17.7	29.7	35.4
1982 27	47.3	47.9	42.3	14.5	43.5	41.3	44.8
1982 28	41.6	46.6	55.3	32.2	36.4	33.0	42.6

PERCENTAGE RN CARE OUT OF ALL CARE GIVEN

1980 All	6.68	17.79	2.49	1.73	1.36	5.29	35.4
1982 27	12.41	18.85	3.32	0.38	0.75	9.01	44.8
1982 28	9.90	19.20	4.65	1.61	0.55	6.63	42.6

D - Direct
I - Indirect
M - Medication
A - Administration
S - Service
P - Personal/Unoccupied

MES:WS/eu
8/23/82

Table 2

MEDICINE UNITS

PERCENTAGE BREAKDOWN OF ALL CARE GIVEN

		D	I	M	A	S	P
1980	All	25.5	37.6	11.4	0.90	7.8	16.8
1982	64	30.4	39.4	12.0	2.80	3.6	11.8
1982	74	26.0	32.6	15.3	3.10	4.8	18.2

PERCENTAGE BREAKDOWN OF RN CARE

								TOTAL
1980	All	20.2	50.8	13.4	1.0	2.7	11.9	100%
1982	64	24.6	43.8	14.7	2.0	3.6	11.3	100%
1982	74	22.0	48.9	9.5	2.2	3.7	13.7	100%

PERCENTAGE RN CARE OUT OF % CARE GIVEN

1980	All	20.6	35.2	30.9	29.2	9.0	18.50	26.1
1982	64	45.8	63.0	69.2	39.9	57.1	54.5	56.6
1982	74	23.0	40.6	16.8	19.1	21.2	20.4	27.1

PERCENTAGE RN CARE OUT OF ALL CARE GIVEN

1980	All	5.26	13.26	3.51	0.25	0.70	3.11	26.1
1982	64	13.91	24.81	8.30	1.12	2.06	6.44	56.6
1982	74	5.97	13.24	2.56	0.59	1.01	3.72	27.1

D - Direct
I - Indirect
M - Medication
A - Administration
S - Service
P - Personal/Unoccupied

MES:WS/eu
8/24/82

their activities. However, there are significant changes in the way RN's are spending their time. On the Primary Care Unit (64) and Total Care Units (27 and 28), there has been an increase in Direct Care. Unit 74, the control unit, has shown no change in the amount of RN direct care. That is, RN's are spending more time in direct patient contact, rather than supervising and relating to other nursing care givers on the alternative care units. Significant changes in all categories are listed below.

Unit 27	Unit 28	Unit 64	Unit 74
Direct (+)	Direct (+)	Direct (+)	None
Indirect (-)	Service (-)	Indirect (-)	
Administrative (-)			

The third comparison provided in Tables 1 and 2 is Percentage RN Care Out of Percentage Care Given. The totals column of this breakdown reflects the current RN ratio (RN observations to all observations). This breakdown reflects the percentage of care provided by RN's of the total care given in each category. That is, the maximum value of each entry is 100; if only RNs prepared and issued medications the value in Column 3 could be 100. If all unit staff participated in all tasks equally, then the expected value in each column would be the "Totals" value.

There are multiple considerations appropriate here to be made and evaluated by clinical nursing management. First, each observation value can be compared with the total ratio; is it appropriate that RNs are performing service activities equal to their staff ratio as on units 27 and 64, or should nurses at other skill levels be performing these activities? The second appropriate consideration is the comparison of the current value to the 1980 value. It is important to note that in all cases, an increase in the amount percent of direct care provided by RNs has increased.

On the alternative care approach unit, however, the increase is more substantial. One must then make the comparison with respect to the change in the RN ratio (totals). Again, in all cases we have increased our amount of direct care by an amount greater than the change in the RN ratio. One can generalize and conclude that changes in the RN ratio will produce comparable changes in the presence of RNs at patients' bedside. These changes are compounded (increased) when an alternative care approach is utilized.

The third consideration is a review of the value in relationship to the intuitive desired level. One can compare the actual, in relation to the 1980 value, to the RN ratio and to the care approach. This review is critical in determination of the most desirable staffing level and care approach.

The fourth comparison, Percentage RN Care Out of All Care Given, further aids in this determination of desired staff levels and care approaches. This portion of Table 1 and 2 indicates all possible care given combinations and the value for RN's in a particular activity. That is, in 1980, on the surgical uits, approximately 7 percent of all unit activity was RNs in direct care. These values are the product of the values in the first and third comparisons (e.g., 1980 Surgical Units; 23.8 percent of all staff time was spent in direct care; 28.1 percent of direct care was given by RNs, therefore, 6.7 percent of all care was direct care by RN's; .238 x .281 = .067).

The values for Unit 74 indicate change has not occurred since 1980 in any category. The other units do reflect substantial changes in direct care, which can be accounted for by the changes in the RN ratio.

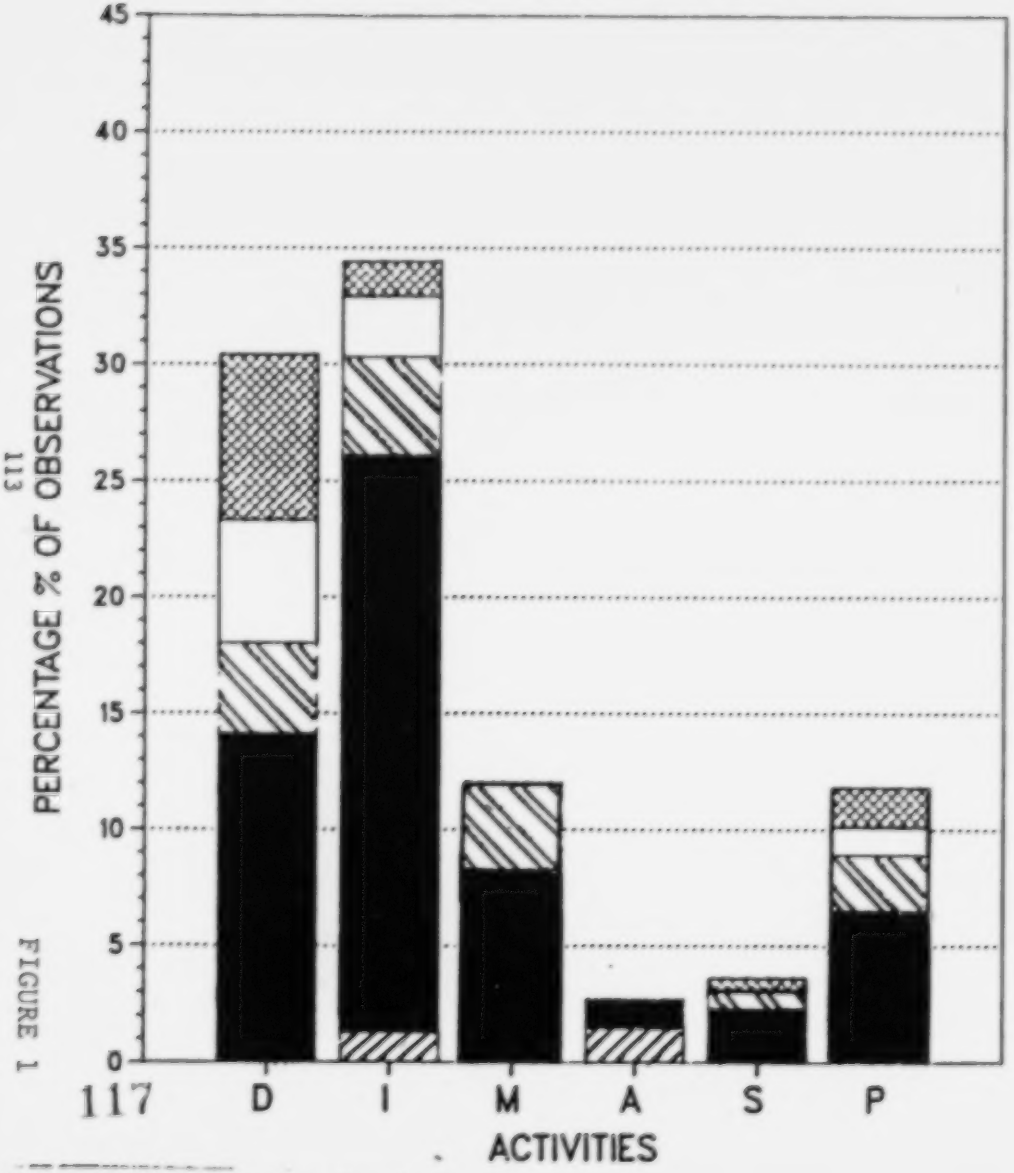
It can be concluded that the alternative care approaches do impact patient care, and that the RN ratio is intrinsic to these approaches. A more visual comparison is provided in Figures 1-6. The most obvious changes appear in Unit 64, where the RN ratio has doubled; the least amount of change can be noted in Unit 74.

Upon reviewing these values, particularly where the alternative care approaches are in place, future attention should ultimately be on those activity levels considered undesirable, or alternatively stated, those activities where exchanges are appropriate. This requires additional study. For example, as was discussed with the Head Nurse for Unit 28, one might initially be concerned with the relative levels of direct and indirect care, 23.8 percent and 41.2 percent respectively.

However, after backing out an allowance for personal and unoccupied time of 17 percent, (82 minutes) and shift report (indirect care, 30 minutes, twice/day), and administrative activities of 2 percent, (10 minutes), the time remaining per day is 328 minutes per eight hour staff member. Of the time remaining, total staff is spending 155 minutes (47 percent) in direct care (including medications) and RN's are spending 164 minutes (50 percent) in direct care (including medications). These values, 42 percent and 50 percent for total staff and RNs respectively, are the intuitive values discussed for direct care. They do not approach the isolated values of 23.8 and 23.2 in the results. Initial concern, therefore was lessened. Another concern was raised though: 30 percent of indirect care was "Report" activities. The intent here is not to suggest conclusions, but to directly state the necessity to spend time reviewing, discussing and challenging the information, nurse activity patterns, and methods for accomplishing necessary activities.

This analysis can be taken one step further and described in hours per patient day. Tables 3 and 4 are such analyses. Tables 3 is presented to show periodic changes in the overall operations of the hospital. Acuity and census changes are shown to be negligible over the two year period. Hours of care per patient day have declined, most noticeably on the Medicine units (64, 74). These changes have resulted from a more prohibitive

NURSING ACUITY STUDY
UNIT 64 MEDICAL
Activities by Skill Level



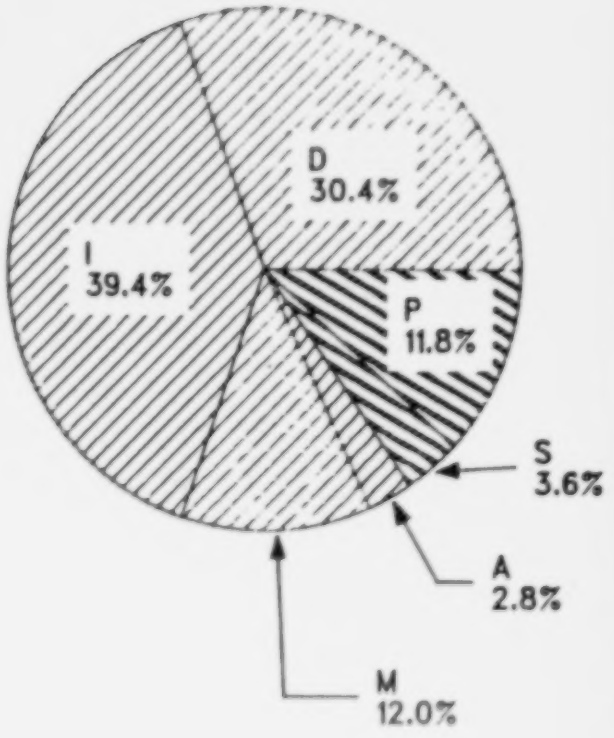
113

FIGURE 1

117

Management Engineering Services

Breakdown of Unit Activities (%)



D -direct care
I -indirect care
M -medication
A -administration
S -service
P -personal time

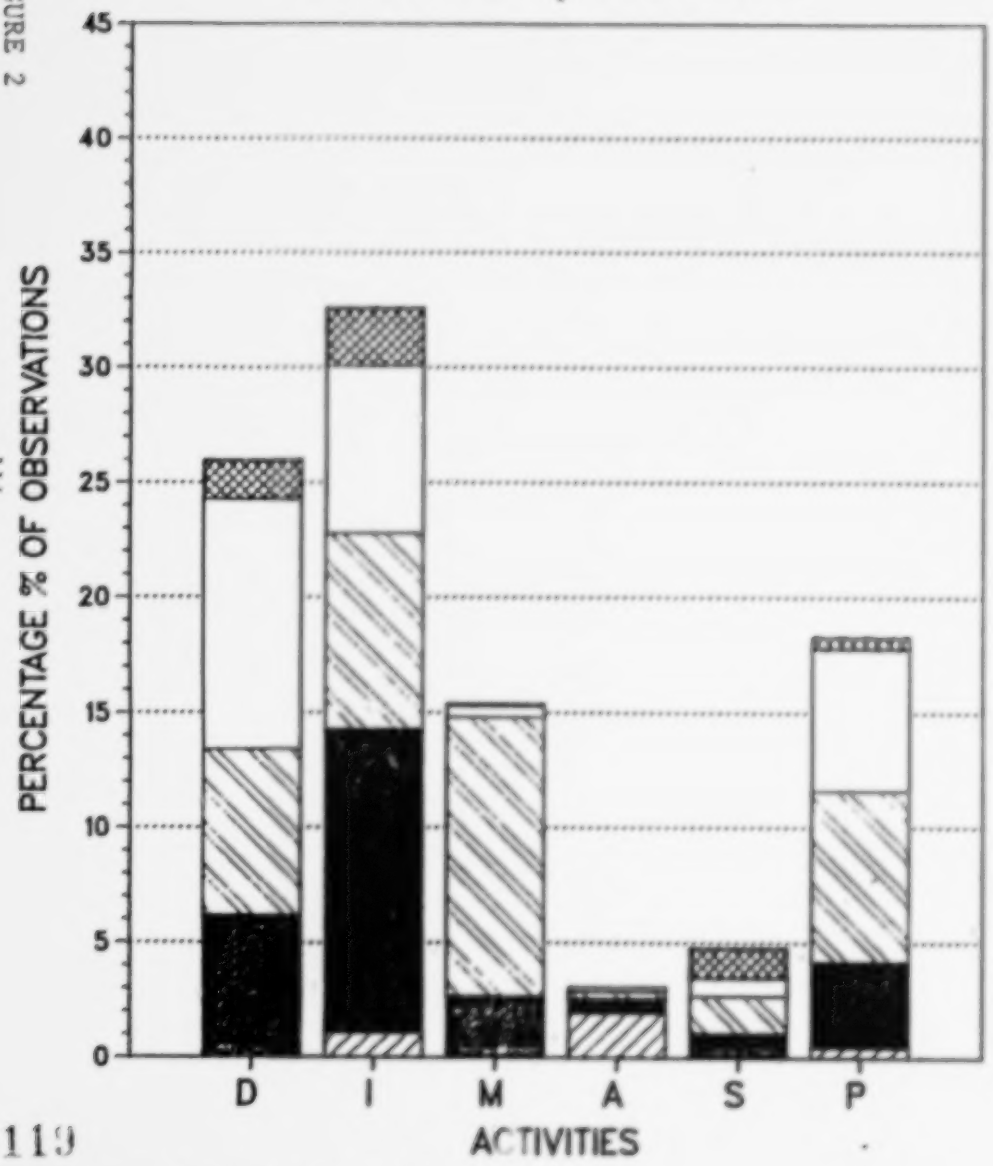
Legend
STDNT
NA/NT
LPN
RN
HN

118

Sinai Hospital of Detroit

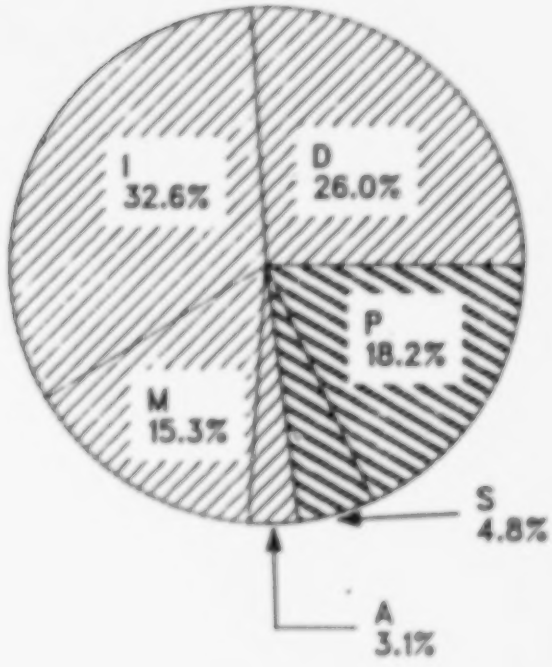
FIGURE 2

NURSING ACUITY STUDY
UNIT 74 MEDICAL
Activities by Skill Level



114

Breakdown of Unit Activities (%)

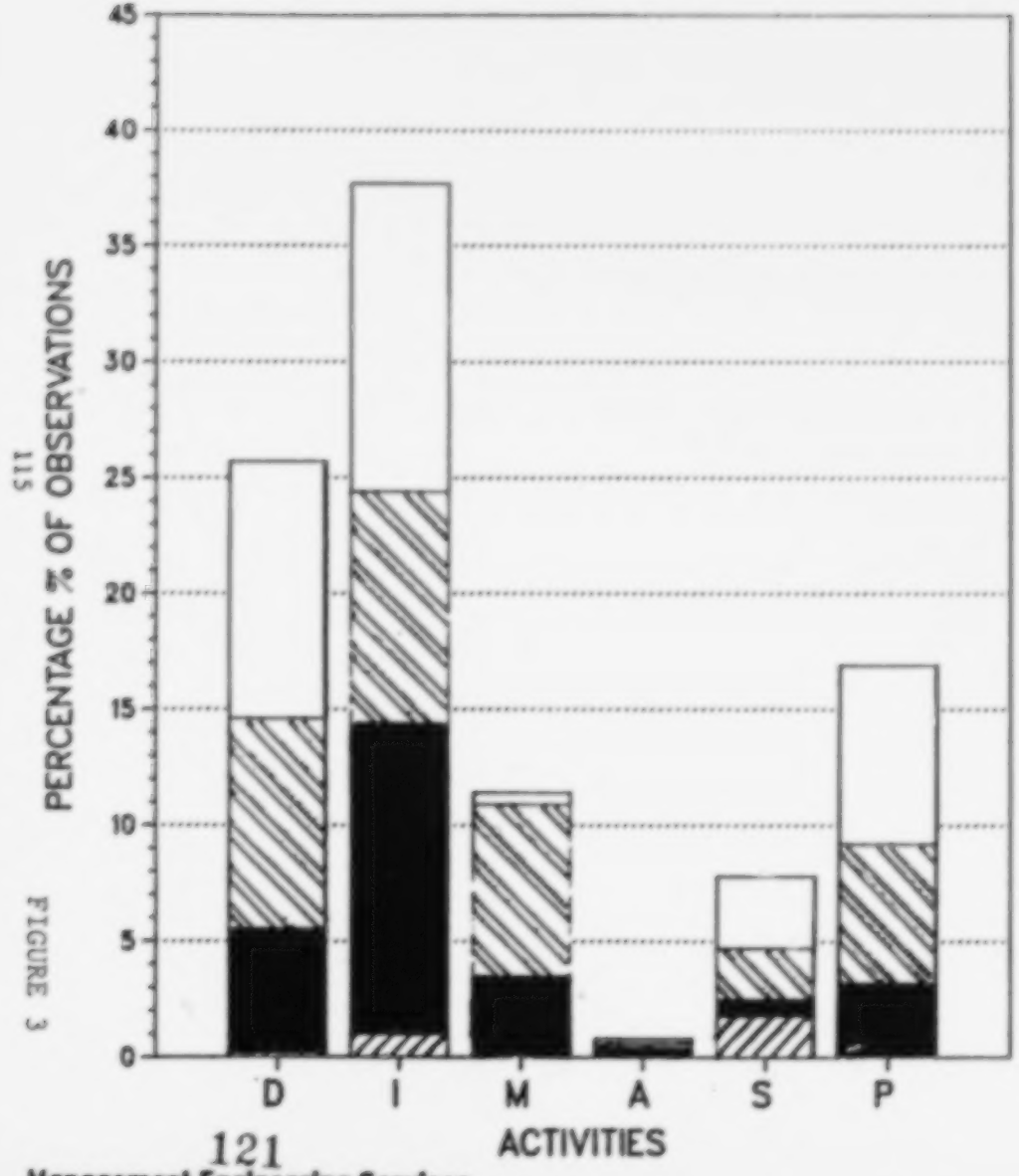


D –direct care
I –indirect care
M –medication
A –administration
S –service
P –personal time

Legend
STDNT
HA/NT
LPN
RN
HN

119

NURSING ACUITY STUDY
MEDICAL 1980
Activities by Skill Level



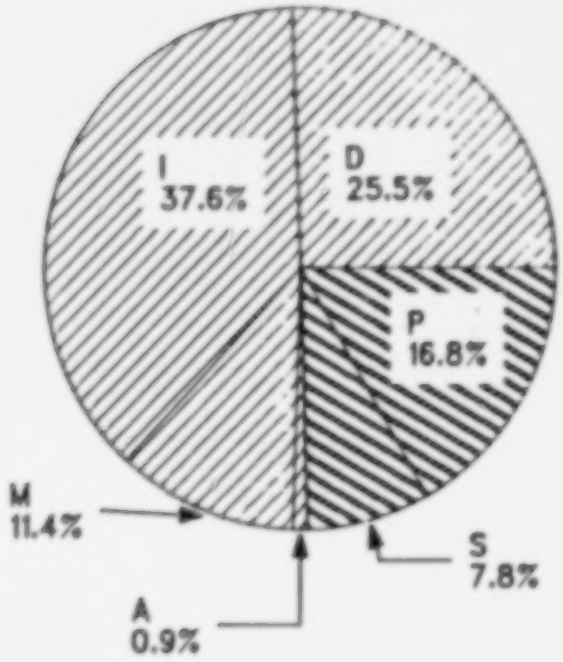
115

FIGURE 3

121

Management Engineering Services

Breakdown of Unit Activities (%)



D –direct care
I –indirect care
M –medication
A –administration
S –service
P –personal time

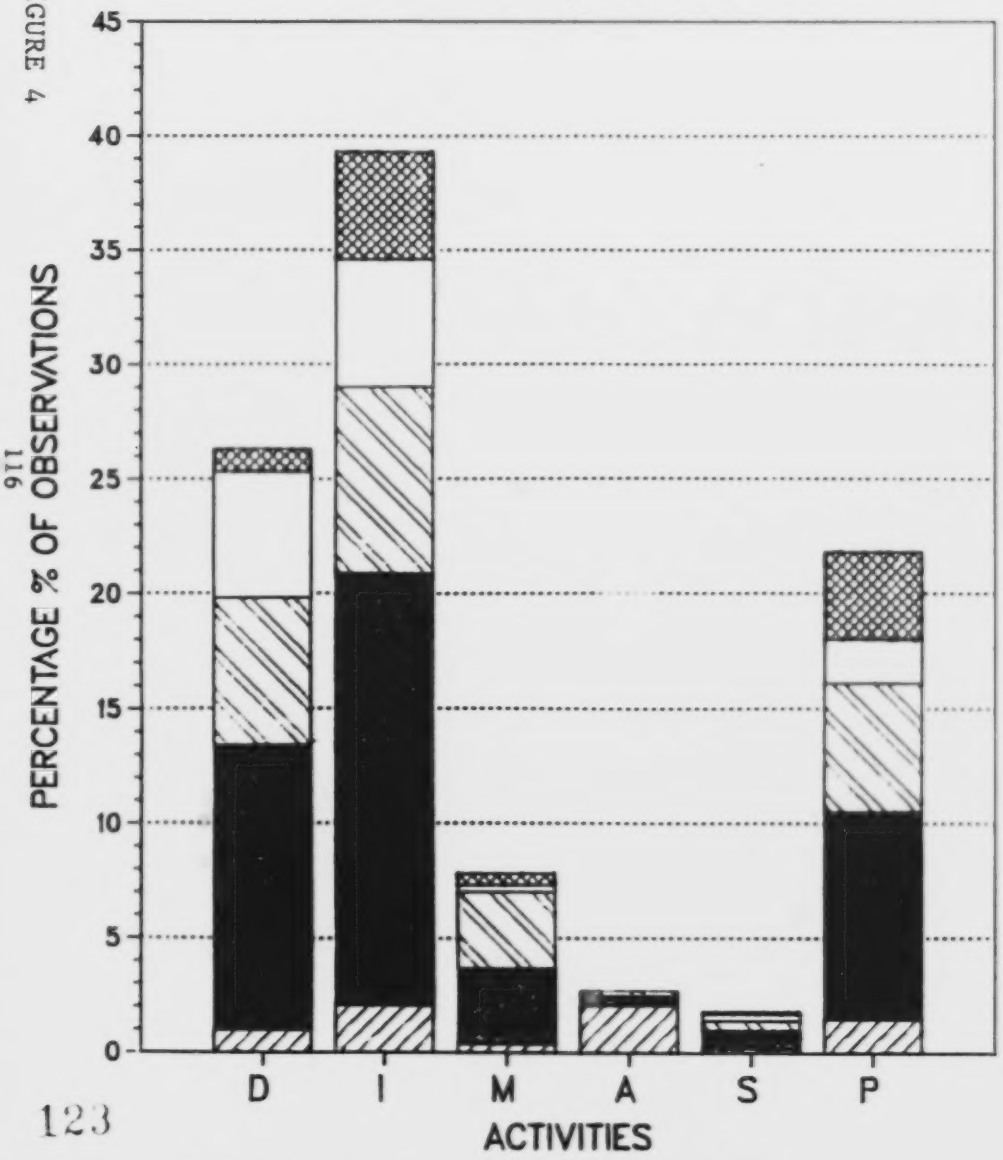
Legend
NA/NT
LPN
RN
HN

122

Sinai Hospital of Detroit

FIGURE 4

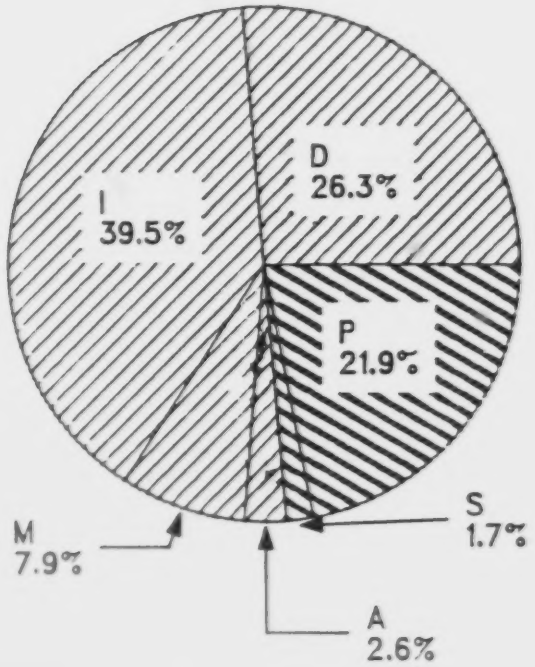
NURSING ACUITY STUDY
UNIT 27 SURGICAL
Activities by Skill Level



116

123

Breakdown of Unit Activities (%)

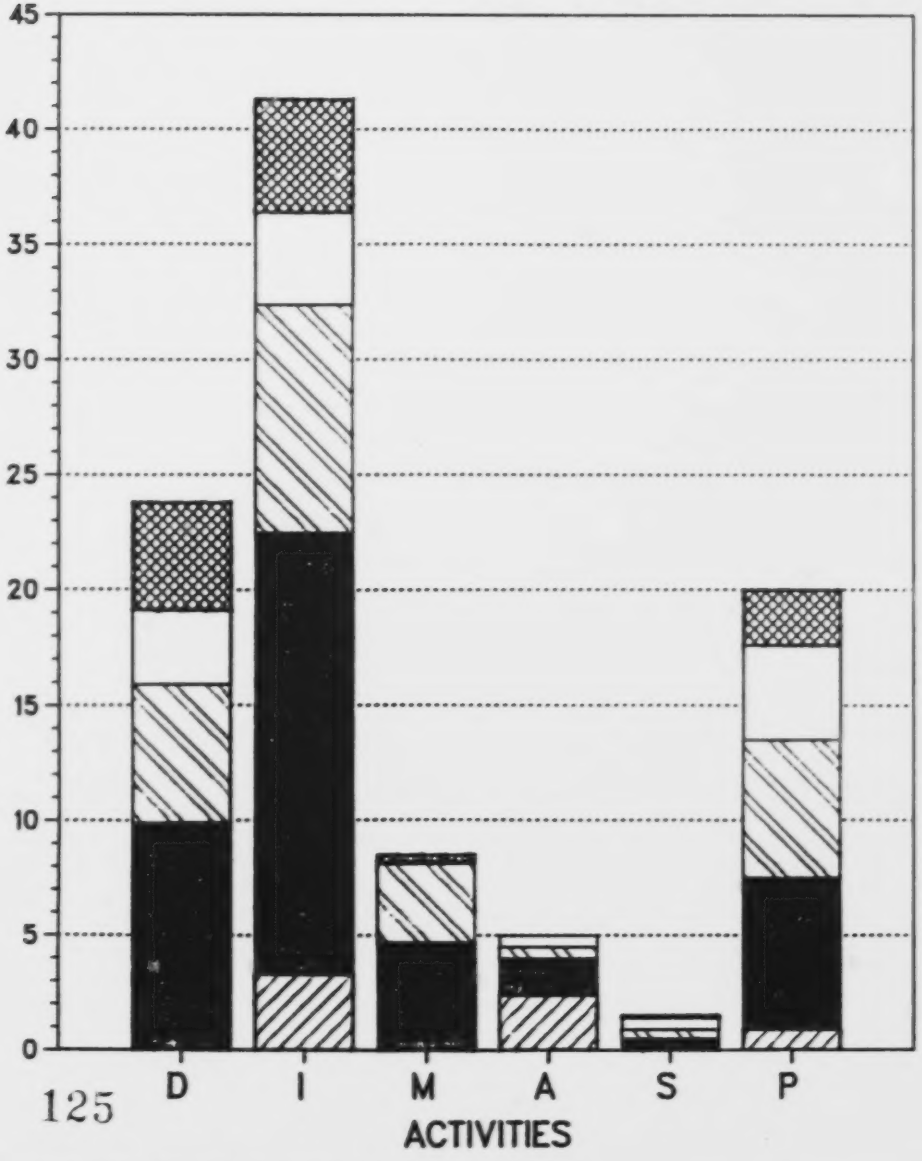


D – direct care
I – indirect care
M – medication
A – administration
S – service
P – personal time

Legend
STDNT
NA/NT
LPN
RN
HN

121

NURSING ACUITY STUDY
UNIT 28 SURGICAL
Activities by Skill Level



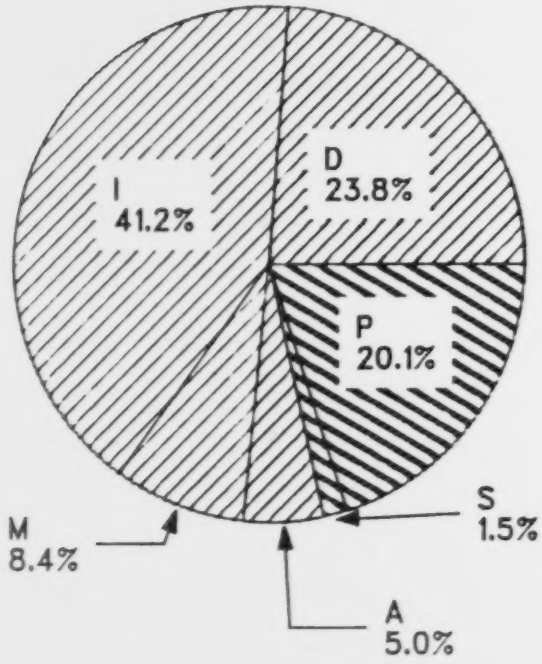
117

FIGURE 5

125

Management Engineering Services

Breakdown of Unit Activities (%)



D –direct care
I –indirect care
M –medication
A –administration
S –service
P –personal time

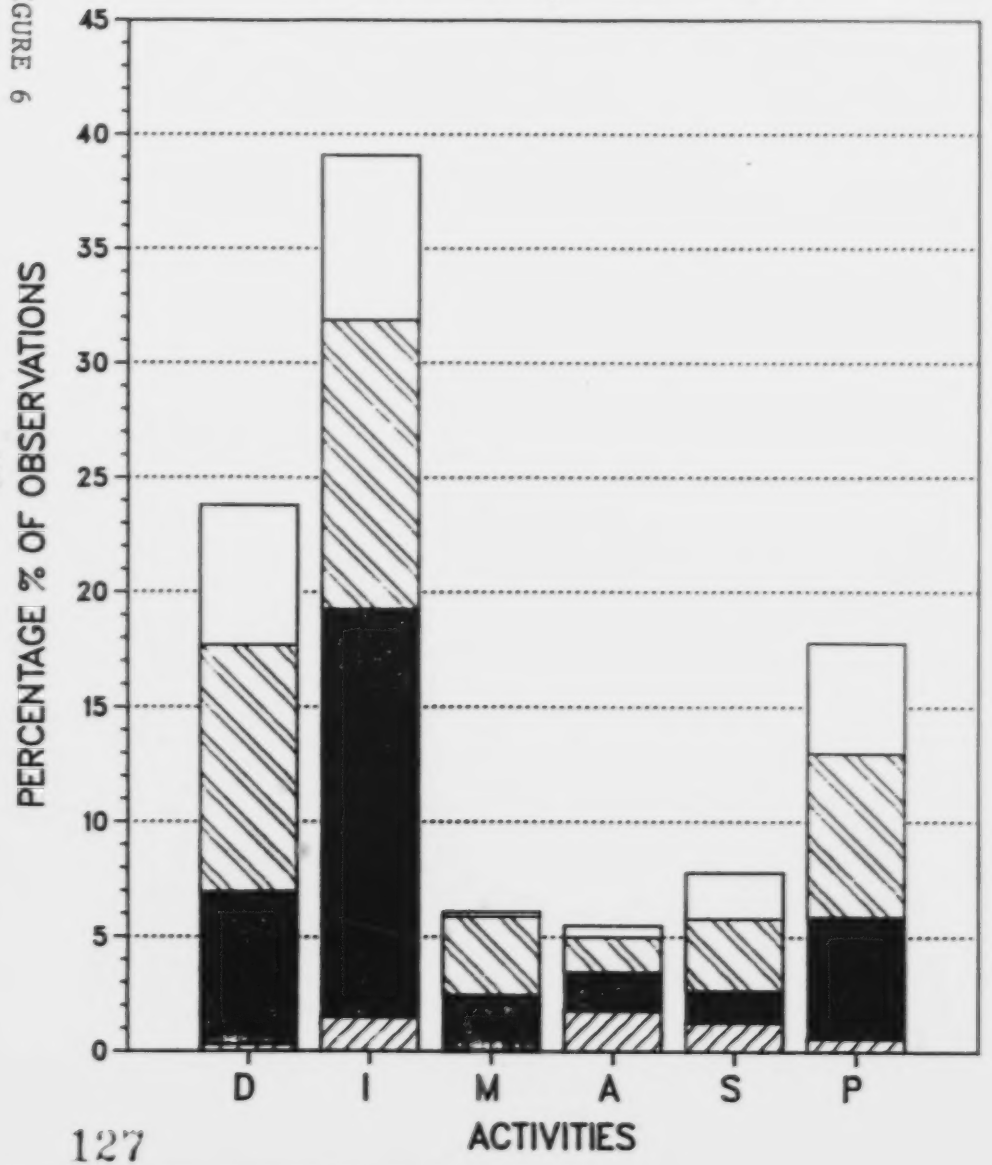
Legend
STDNT
NA/NT
LPN
RN
HN

126

Sinai Hospital of Detroit

NURSING ACUITY STUDY
SURGICAL 1980
Activities by Skill Level

FIGURE 6

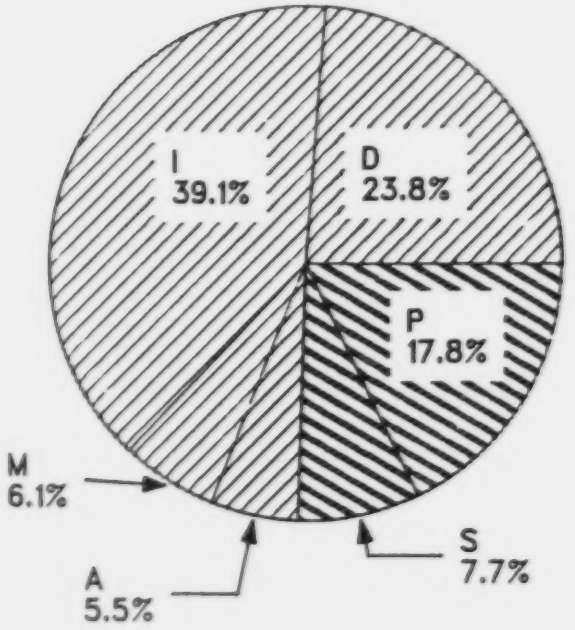


118

127

Management Engineering Services

Breakdown of Unit Activities (%)



D –direct care
I –indirect care
M –medication
A –administration
S –service
P –personal time

Legend
NA/NT
LPN
RN
HN

128

Sinai Hospital of Detroit

Table 3

Sinai Hospital of Detroit
Management Engineering Department

HOURS PER PATIENT DAY & CENSUS

COMPARISONS OF 1980 - 1983

	MAY 16 - JUNE 12, 1982				JUNE 14 - AUGUST 8, 1981			APRIL - JUNE 1980			AUGUST 198	
											Four Week Averages	
	Hours/ Patient Day	Average Daily Census	Average Acuity	R.N. Hours/ Pt. Day	Hours/ Patient Day	Average Daily Census	Average Acuity	Hours/ Patient Day	Average Daily Census	R.N. Hours Pt. Day	Hours/ Patient Day	Averaged Daily Census
UNIT 74	4.39	30.1	2.0	0.98	5.31	30.0	2.0	5.28	35.0	1.09	5.54	31.6
UNIT 64	4.12	35.6	2.3	1.48	4.74	35.8	2.5	5.60	36.1	1.07	6.46	35.5
UNIT 27	4.90	22.4	1.8	2.03	4.94	22.2	2.0	5.20	22.4	1.56	5.02	23.03
UNIT 28	5.56	19.8	1.9	2.20	5.72	20.2	2.1	5.65	20.2	1.68	5.34	20.79

*Values for 'Hours per Patient Day' have been adjusted from earlier reports to exclude Head Nurse hours.

	MAY 29 JUNE 25, 1983			
	Hours/ Patient Day	Average Daily Census	Average Acuity	R.N. Hours/ Pt. Day
Unit 74	5.41	31.1	2.3	2.03
Unit 64	4.57	36.4	2.1	2.26
Unit 27	5.53	27.0	2.3	2.90
Unit 28	5.32	20.8	2.0	3.16

Table 4

Sinai Hospital of Detroit
Management Engineering Department

EFFECTIVE HOURS OF CARE PER PATIENT DAY
COMPARISONS OF 1980 & 1982*

	TOTALS									R.N. HOURS							
	1980				1982					1980				1982			
	SALARY $ PER PT. DAY	ACTUAL	EFFECTIVE	DIRECT	DIRECT & MED.	SALARY $ PER PT. DAY	ACTUAL	EFFECTIVE	DIRECT	DIRECT & MED.	ACTUAL	EFFECTIVE	DIRECT	DIRECT & MED.	ACTUAL	EFFECTIVE	DIRECT	DIRECT & MED.
UNIT 64	$41.72	5.60	4.66	1.45	2.07	$36.24	4.12	3.63	1.25	1.75	1.07	.94	.22	.36	1.48	1.31	.36	.61
							-26.1%	-22.1%	-12.6%	-15.5%					+35.8%	+39.4%	+63.6%	+69.4%
UNIT 74	$41.24	5.28	4.39	1.34	1.95	$33.89	4.39	3.59	1.14	1.81	1.09	.96	.22	.37	0.98	.85	.22	.31
							-16.9%	-18.2%	-14.9%	-7.2%					-10.1%	-11.4%	0	-16.2%
UNIT 27	$44.10	5.20	4.27	1.24	1.55	$43.32	4.90	3.83	1.28	1.67	1.56	1.33	.29	.40	2.03	1.62	.56	.72
							-5.8%	-10.3%	+3.2%	+7.7%					+30.1%	+21.8%	+93.1%	+80.0%
UNIT 28	$47.40	5.65	4.64	1.34	1.69	$49.03	5.56	4.44	1.32	1.79	1.68	1.43	.32	.44	2.20	1.85	.71	.75
							-1.6	-4.3	-1.5%	+5.9%					+31.0%	+29.4%	+121.9%	+70.5%

RNs: *Based on average hourly salary; 1980 dollars factioned by 1.145; straight time comparison for all unit staff except Head Nurse and Unit Clerk.

RNs: Effective time eliminates personal and unoccupied hours.

MES:WS/eu
10/27/82

use of overtime and agency personnel. RN hours per patient day have increased, with the exception of Unit 74, showing skill mix changes have occurred.

Table 4 extends this analysis to include cost comparisons, and direct hours of care per patient day; RN values are listed separately. Again, in all cases the total hours of care per patient day have been reduced, Unit 74 shows a comparable decline in total direct hours of care. However, Units 64 and 27 have a significantly smaller reduction in direct care. Unit 28 has the least change in both areas. This indicates the extent to which changes in care approach impact a patient's direct care.

RN comparisons of hours of care (Table 5) show increases in total actual hours with the exception of Unit 74, a result of skill mix changes on other units. The most dramatic difference is on Unit 64, total actual hours have decreased 26%, RN actual hours have increased 36%. Comparable changes would be expected in direct care.

Table 5

HOURS OF CARE CHANGES (percentage) SUMMARY

	Actual Hours	RN Direct Hours
Unit 64	-26%	+64%
Unit 74	-17%	0
Unit 27	- 6%	93%
Unit 28	- 2%	122%

These changes led to the conclusion that the alternative skill mix and care approaches have a substantial impact on patient care. Combining direct care and medication (often considered direct) demonstrates similar changes. These changes have occurred with a favorable cost change (using average hourly salary). The implication is that these changes may also be accomplished on most nursing units.

Development and Implementation of Management Engineering within the Nursing Department as a Cost Containment Strategy

by Madeline R. Zaworski, RN, MSN, CNAA
Mary Muzilla, MBA

Governmental regulations, arising from labor's request for increased salaries, and patient/consumer demands for high quality, cost-effective medical care have created a need for the development of creative cost containment strategies by health care administrators. The purpose of this presentation is to present a cost containment strategy which was implemented in the Nursing Department of Lorain Community Hospital, Lorain, Ohio. It was proposed that a management engineering position, Nursing Systems Manager be authorized. The person filling this position would develop plans, conduct studies, and make recommendations to the Nursing Service Administrator to achieve improvements in Management of personnel, finance, and equipment systems.

Lorain Community Hospital is a 343 bed community hospital located in Northeastern Ohio. Personnel in the Nursing Department represent more than half of the hospital's full-time equivalent (FTEs). The financial management of the Nursing Department had previously been done intuitively, especially with regard to nurse staffing.

The management engineering position has been in effect since September, 1979. The person hired for this position is female, holds a MBA, and has experience in systems development, but initially lacked experience in health care. She reports directly to the Nursing Service Administrator in staff position, and functions as a voting member of the Nursing Executive Committee and hospital-wide Middle Mangement Group. The strategic placement of this position on the organizational chart is very important in respect to both formal and informal power base. It was particularly helpful in our organization, since the person hired for the position was not a nurse.

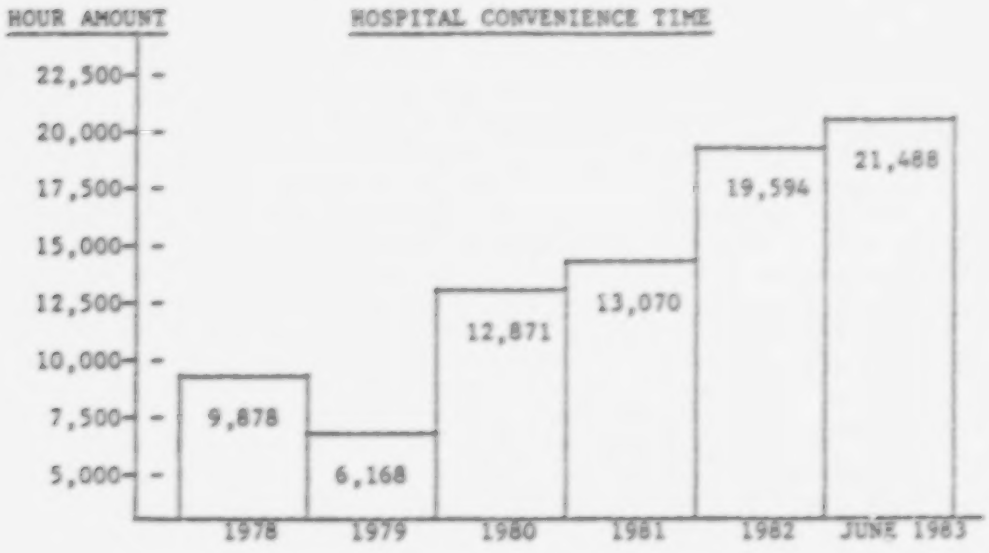
The first area studied was staffing. Replacements for staffing previously had been approved without regard to budget, need for a particular job classification, or fulltime/part-time status. Agency help was scheduled weeks in advance with approval by Head Nurses, based on their needs assessment.

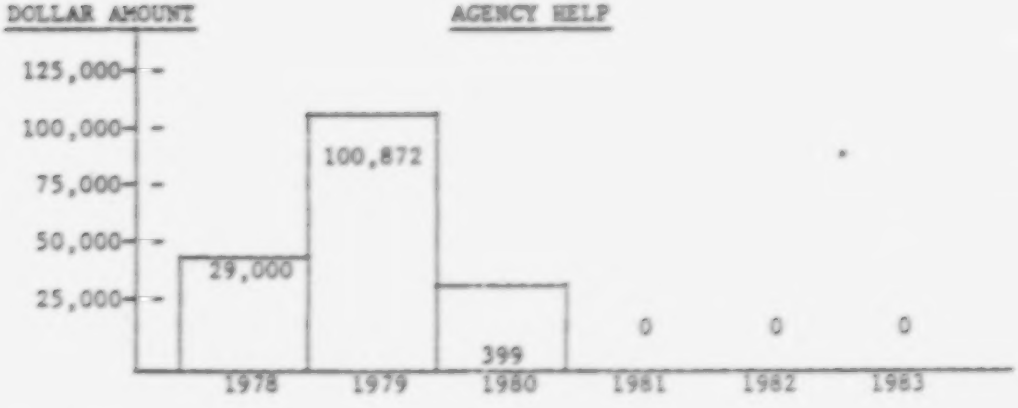
To address this problem, the Management Engineer (ME) performed job analyses on the nursing units. "Mock schedules" or long range staffing plans were developed with input from Nursing Administration. Head Nurse input was important for acceptance of the "mock schedules." Controls were developed for the approval of agency help and overtime. Flex time was considered, and centralized staffing was proposed.

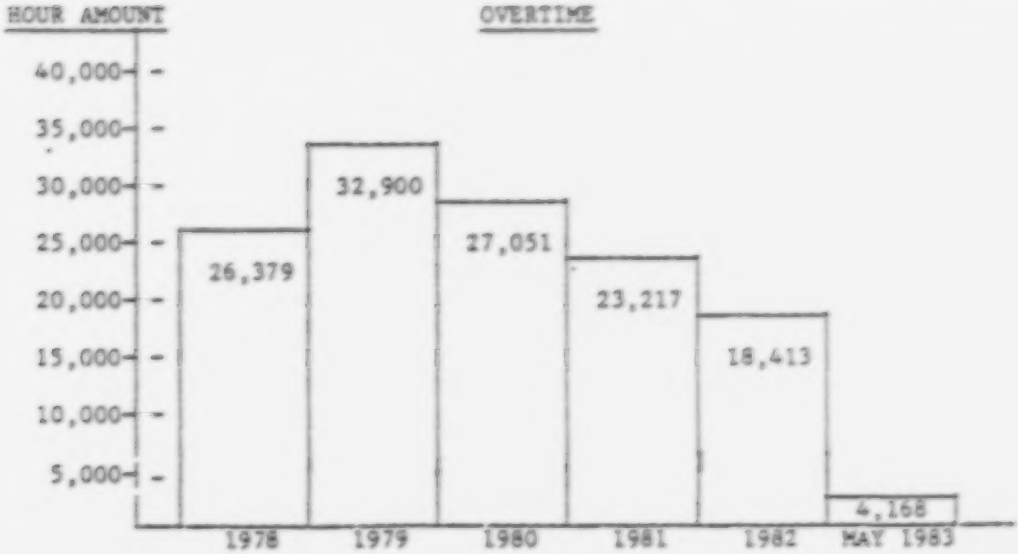
Exhibit I displays the outcomes of these interventions over the past four years. Agency help has been eliminated, overtime has decreased sub-

EXHIBIT I

FINANCIAL INDICATORS FOR THE NURSING DEPARTMENT - 1982







MM/mhm
7/29/83

stantially, Hospital Convenience Time has increased, and the mix of nursing staff has improved.

The second area of concern addressed by the ME related to personnel policies. There was a paucity of nursing personnel policies; salary scales were not reviewed in a consistent manner; and the Personnel Department position control for nursing was not in compliance with that of the Nursing Department. Also, there were several problem areas between the Nursing and Personnel departments with regard to protocol for hiring, interviewing, and promotion. Flow charts for hiring and communication processes were developed, which have facilitated problem solving.

The ME worked with Nursing Administration and Personnel to write personnel policies for staffing and scheduling, as well as many other policies pertaining to personnel benefits which needed to be developed or revised within the Nursing Department. The Nursing Service Administrator, Personnel Administrator, and ME worked on reviewing salary scales and made adjustments to areas which were out of line without apparent justification. The ME also worked with Personnel on developing accurate systems for position control.

The Acuity System was the third area addressed. An outside consultant was in the process of implementing an acuity system when the ME was hired. After reviewing the proposed system, the ME worked with Nursing Administration to revise and expand the system. Individualized time studies were conducted and itemized nursing hours were available which later proved beneficial for use with the new DRG system.

The acuity data feeds into the staffing systems and provides a helpful check and balance for staffing. The original acuity system is in place on most of the units. A revised and more accurate acuity system is in place on three nursing care units within the hospital. The areas that have the new acuity system in place agree that it is very reliable.

As a result of the staffing acuity and personnel systems developed over the past four years, and the identified need for a computer software staffing package, the ME sought out Burroughs Corporation and together they developed a staffing, acuity, and personnel system software package, which is to be on-line at Lorain Community Hospital by November, 1983 and will be available for marketing nationally to hospitals.

Another project assigned to the ME was the budgeting process. In the past, the budgeting process for the Head Nurse consisted of a one-time planning meeting with the Nursing Service Administrator. During the year, orders were placed as deemed necessary or authorized by the budget. The ME initiated educational sessions with all Nursing Leadership personnel to teach them the budgeting process and how it should be used. The area that was most difficult for the Head Nurse was developing objective rationale and computing return on investment. Work is presently being done with the

controller to review current budget practice to assist all Managers and Department Heads. Included in this are reports for the Managers, important statistics, cost allocation, and productivity standards.

The ME also works with Materials Management. In the past, par levels were not established for various supply needs. There were multiple problems with stock room and overstocking. With the aid of the Director of Materials Management, par levels were identified, exchange carts were developed for the units, prices for products were compared, cost benefit analyses were performed, and a variety of supply and equipment systems were developed. An example of cost savings was the inventory of sutures used in operating room, resulting in the development of a system for stocking, reorder, and limitation of the number of brands used for a cost savings of over $35,000 per year.

Many other benefits of the use of a ME within the Nursing Department could be elaborated upon. One piece of objective data that has been very beneficial as an evaluation criterion has been the decrease of nursing costs, 2.5 hours per diem (while the personnel mix and quality of nursing care demonstrated measurable improvements.) Several important unanticipated outcomes were achieved. The fiscal power base of the Nursing Service Administrator has increased in the eyes of the Chief Executive Officer, Chief Financial Officer and Board of Trustees. The relationship of the Nursing Department with other key departments such as Fiscal Services, Materials Management, Information Systems, and Personnel has improved.

In summary, the development and utilization of a staff position in management engineering for Nursing Service has been successful as a cost containment mechanism and is recommended as a solution to meet the future challenge of health care cost containment.

Comparison of Two Methods of Hospital Orientation In Cost Effectiveness and Practice Efficacy for Registered Nurses

by Barbara Flewellyn, RN, BSN

This is a descriptive study to compare traditional hospital orientation with competency-based orientation on the basis of cost to the hospital, and the practice abilities of registered nurses and newly graduated nurses participating in each type of program.

Today, health care institutions are confronted with the problem of newly employed nurses who are unable to meet job expectations without prolonged orientation or transition periods. This is a result of time constraints in nursing education, and emphasis on a theoretical framework for practice, and less technical and clinical skills being taught in schools of nursing (Everson, Ponoc, Pratt, & King, 1981).

At the same time, health care costs are rising rapidly and the demand for cost containment is greatly influencing the methods for providing health care. The task that nurse administrators and staff development instructors face is that of developing orientation methodologies that will facilitate the transition of broad-based, conceptual skills into clinical care delivery skills. Orientation must occur as rapidly and as cost effectively as possible to avoid overwhelming the new nurse, confusing the staff, or compromising the quality of patient care (Everson, et al, 1981).

To accomplish this, staff development instructors have begun devising more non-traditional strategies, such as self-learning packages, internships, and contracts. The major focus has been to involve the learner more in the orientation process to increase the effectiveness of current approaches and reduce the amount of class and instructor's time. The most recent strategy used by instructors has been incorporation of competency-based education into the health setting. This approach involves the orientees in assessing, identifying, and planning the orientation to meet their own learning needs.

Proponents of the competency-based approach to orientation proclaim that the individual learning needs of the new employee are better met than with the traditional approach, resulting in a better prepared orientee. Also, because of the increased participation of the new employee, less structured class time is required, thus, reducing cost.

Proponents of competency-based education cite involvement of the learner in the educational process, mastery of skills based on pre-set criteria, and competency evaluation based primarily on the learner's demonstrated performance, as the strengths of this approach (del Bueno, 1981; Monjan & Gassner, 1979; Spady, 1977).

Critics cite time, cost, and lack of an agreed upon definition of competency as reasons why competency-based education may not be effective in all settings (Benner, 1982; Hart, 1976; Pollock, 1981; Rinke, 1980).

Benner (1982) had difficulty developing competency-based examinations that reflected the performance, demands, resources, and constraints of actual nursing practice for new graduates. The test development efforts were hindered by the lack of adequate methods for identifying competencies and the lack of pre-existing definition of competency in nursing.

Also, Benner was unable to determine how to measure the nurse's ability to assess a problem or to select and implement strategies for problem resolution. Competency-based testing seems limited to less situational, less interactive areas of patient care where the behavior can be well defined, and where patient and nurse variations do not alter the performance criteria.

Conceptual Framework

The conceptual framework of this study is based upon Knowles' principles of adult education: A comparision of the teaching methods utilized in hospital orientation and the responses of the learners by their ability to demonstrate competencies expected in their role. According to Knowles (1973), efforts to develop a distinctive theory of adult learning has evolved a new technology called andragogy.

In contrast to the content models employed by most traditional educators, the andragogical model is a process model. In traditional education, observed in some hospital orientations, the teacher decides in advance what knowledge or skills need to be transmitted, arranges the content into logical units, selects the most efficient means for transmitting this content, and then develops a plan for presenting these content units in some sort of sequence.

The andragogical teacher prepares in advance a set of procedures for involving the learners in a process to: a) establish a climate conducive to learning, b) create a mechanism for mutual planning, c) diagnose the needs for learning, d) formulate program objectives that will satisfy these needs, (e) design a pattern of learning experiences, f) conduct these learning experiences with suitable techniques and materials, and g) evaluate the learning outcomes and rediagnose learning needs.

The content model is concerned with transmitting information and skills, whereas the process model is concerned with providing procedures and resources to help learners acquire information and skills. Staff development instructors utilizing competency-based orientation view that approach as a process model. It meets the individual learning needs and provides resources for helping registered nurse orientees acquire information and skills.

Research Questions

Questions addressed by this study are:

1. Is there a difference in the registered nurse subjects' level of selfrated competency following traditional and competency-based orientation?

2. What are the preferred learning methods of competencybased and traditional registered nurse orientees?

3. What is the cost to the hospital for each type of orientation program?

Method

For this study, terms were defined as follows:

Competency: a task, skill, or knowledge based on a set of criteria and/or level of expectation for the registered nurse following orientation.

Traditional Orientation: preplanned and scheduled program consisting of specific classes, self-learning packages, and practices required for all registered nurses oriented during their first two to six weeks of employment.

Competency-Based Orientation: program consisting of structured classes, self-learning packages, and/or specific learning experiences identified and scheduled by the nurse being oriented to meet a learning need. Length of orientation depends on the orientee's ability to meet outcome criteria established for the registered nurse.

Setting

Data was collected from newly-employed registered nurses at six general hospitals in a large city in Northeast Ohio. The hospitals ranged in size from 300-475 beds. Three of the hospitals offered competency-based orientation programs and three offered traditional orientation programs. The hospitals were selected from the 1982 Greater Cleveland Hospital Association Directory. A phone survey of the thirty-one general hospitals listed revealed that only three had a competency-based program. Thus, a random selection of three similar hospitals offering traditional orienation was made so that comparison would be possible. All six hospitals were similar in type, bed size, affiliation with schools of nursing, and full time orientation staff assigned to instruct newly hired registered nurses.

Sample

The sample consisted of 111 registered nurses and new nurse graduates participating in orientation programs at the six selected hospitals from June 1, through September 30, 1983. No distinction was made for years of experience, age, sex, or type of educational preparation. Participation

was voluntary and required completion of a pre- and post-orientation questionnaire.

The information in this report is based on data from 85 of the 111 questionnaires; 56 of the 59 from traditional programs and 29 of the 52 from competency-based programs. This convenience sample consists of 93 percent of the orientee population in the six general hospitals from June through September (111 to 119). Five orientees did not volunteer to participate and three resigned during the orientation period.

Instruments

The instruments for data collection consisted of a 73 item pre- and post-questionnaire, and a cost analysis form developed by the researcher for this study. The content of the pre- and post-questionnaire was based on review of literature, review of RN job descriptions, professional experience of the researcher, and consensus of 34 directors of staff development and directors of nursing. This expert consensus established content validity. Thirty registered nurse orientees from other hospital settings completed the pre- and post-orientation questionnaire during a pilot study to establish reliability.

The pre- and post-questionnaire consisted of two parts. The first part consisted of 73 competencies expected of the registered nurse following orientation. The response pattern for each competency was in the form of a five-point Likert-type scale, with a value assigned to each response. The responses ranged from "highly competent" to "incompetent."

The second part of the pre-questionnaire solicited demographic data. The second section of the post-questionnaire solicited further information about the orientee's orientation including a rating scale for the best learning methods.

The cost analysis form was developed utilizing recommendations by Smith (1982) and consisted of 4 major sections:

a) orientee cost, b) instructor cost, c) orientation session cost (non-reusable materials), and d) orientation program development cost.

Data Collection Procedure

The questionnaires were administered to the orientees by the staff development instructors. Consent forms were signed by the orientees prior to completing the questionnaires. The pre-questionnaire was administered the second day of orientation to avoid conflict or confusion with other hospital forms usually given to orientees for completion on the first day.

The post-questionnaire was administered on the last day of orientation, following the same procedure used to administer and collect the pre-questionnaires. A specific procedure was established to assure confidentiality of the data from the orientees. Both questionnaires were administered

in a classroom/conference room within the education department. The researcher collected the questionnaires weekly.

Findings and Analysis

So that the findings thus far can be viewed in proper perspective, specific demographics of the subjects must be discussed. As listed in Tables 1 and 2, the 56 orientees in traditional orientation programs were fairly evenly distributed with regard to education, except for the MSN level. In the competency-based programs, however, 76 percent were prepared at the diploma level.

TABLE 1

EDUCATIONAL PREPARATION OF SUBJECTS

EDUCATIONAL LEVEL	TRADITIONAL N	%	COMPETENCY-BASED N	%
DIP.	21	37%	22	76%
AD	20	36%	3	10%
BSN	13	23%	4	14%
MSN	2	4%	0	0%
	56	100%	29	100%

TABLE 2

EXPERIENCE LEVEL OF SUBJECTS

EXPERIENCE LEVEL	TRADITIONAL ORIENTEES N	%	COMPETENCY-BASED ORIENTEES N	%
INSTRUCTOR OR SUPERVISOR	1	2%	-	-
NURSE MANAGER	4	7%	-	-
STAFF NURSE	25	45%	2	7%
NO PROFESSIONAL EXPERIENCE	26	46%	27	93%
	56	100%	29	100%
**********				
LPN	5	9%	2	7%
NA/NT	13	23%	15	52%
UNIT CLERK	1	2%	2	7%

This holds true for the subject's experience level where 46 percent of traditional orientees had no professional experience versus 93 percent of competency-based orientees. Both groups, however, had some health related experience in other roles. These variables may explain the higher intitial competency ratings by the traditional orientees on the pre-questionnaires. Since the majority of the competency-based orientees are new graduates, a comparison of the competencies of new graduates from both groups will be included in the final draft of this study.

Question 1

Is there a difference in the registered nurse subjects' level of self-rated competency following traditional and competency-based orientation?

In analyzing scoring on the pre and post questionnaire only differences in the 'highly competent' section were considered. A comparison of the initial percentage rating of both groups with the percentage rating at the end of their orientation period is shown in Table 3.

TABLE 3

PRE & POST TEST MEAN SCORES

PROGRAM	N	PRE-TEST	POST-TEST	PERCENT CHANGE
TRADITIONAL	56	44%	57%	30%
COMPETENCY-BASED	29	25%	44%	76%

Forty-four percent of the traditional orientees rated themselves 'highly competent' on the pretest. This increased to 57%, showing a 30% increase in competency rating. Twenty-five percent of the competency-based orientees rated themselves 'highly competent' initially versus 44 percent at the end of orientation, indicating a 76 percent increase in competency level.

The traditional orientees displayed the greater competency in: coordination of home-going instructions and follow-up, decision making, nursing skills related to respiratory care, and provision of care to a group of patients and team leading. The competency-based orientees displayed the greatest increase in competency in developing a care plan; procedural skills such as IV therapy, administration of medication, and urinary catheterization; interpersonal relation skills; and use of patient care equipment.

Question 2

What are the preferred learning methods of competency-based and traditional registered nurse orientees?

TABLE 4

PREFERRED LEARNING METHODS[a]

METHODS	TRADITIONAL	COMPETENCY-BASED
LECTURE	4	5
TEACHER DEMONSTRATION	2	4
[b]CLINICAL EXPERIENCE	1	1
NURSING SKILL LAB	5	3
[b]SEMINAR GROUP	9	9
REFERENCE READINGS	6	8
SKILL CHECK-OFF LIST	8	10
[b]SELF LEARNING PKG./LAB	7	7
PRECEPTORS	3	2
VIDEO TAPE	7	6
[b]AUDIO TAPE	10	10
OTHER	11	12

a - Rating scale 1 to 12. 1=the best; 12=least preferred.
b - Same rating by both groups.

Twelve learning methods were listed in the post questionnaire. The orientees were to rate these methods from 1 to 12. A rating of one indicated the best learning method, and 12 the least preferred as indicated in Table 4. Both groups rated clinical experience, teacher demonstration, and preceptors as the most preferred methods. Several of the methods were rated the same by both groups.

Of particular interest is the rating of seven for self-learning packages/lab. As orientation programs are revised to include more self-learning units, an indepth assessment must be made of the orientees to determine the effectiveness of this method for their learning. This also may have some implications for planning curriculum in schools of nursing.

Question 3

What is the cost of the hospital for each type of orientation program?

TABLE 5

COST OF ORIENTATION PROGRAMS-ORIENTEE

PROGRAM	N	RN ORIENTEE	
		TOTAL COST	PER ORIENTEE
TRADITIONAL			
New Graduate	26	$26,640	$1,140
Experienced RN	30	$37,800	$1,260
COMPETENCY-BASED			
New Graduate	27	$61,500	$2,280
Experienced RN	2	$ 4,200	$2,100

Formula:

RN/GN salary/Hr. X Hrs. of orientation X No. of orientees

In this study the average salary for new graduates was $9.50/hour and the average salary for experienced RNs was $10.50/hour. Traditional orientation programs were scheduled three to five weeks with the average of three weeks. Competency-based programs were scheduled six to ten weeks with the average of six weeks. Table 5 graphically displays the difference in

cost. Competency-based programs cost twice as much for the new graduate and the experienced registered nurse.

TABLE 6

COST OF ORIENTATION PROGRAMS - INSTRUCTOR

PROGRAM	N	INSTRUCTOR	
		FORMALIZED CLASS	CLINICAL OBSERVATION
TRADITIONAL	11	$8,784.60 (60 hrs.)	$4,831.53 (33 hrs.)
COMPETENCY-BASED	12	$4,631.40 (31 hrs.)	$10,756.80 (72 hrs.)

The formula used for determining the cost of instructors during orientation was:

Salary/Hr. X Hrs. of orientation X No. of orientees
a) formalized class
b) clinical observation

The average salary for instructors in the three sample hospitals with traditional programs was $13.31/hour. Average salary for competency-based instructor was $12.45/hour. Formalized class time in traditional programs averaged 1 1/2 weeks or 60 hours; Class time in competency-based orientation is 31 hours.

As can be observed in Table 6, the cost of the instructor in both programs is almost the same, but the utilization of the instructors' time is different. The time in class and clinical in the competency-based orientation is just the reverse of the time in traditional programs.

Cost of Orientation Session

The objective was to determine the cost of preparation for each orientation session. Particularly, the cost of non-reusable/returnable materials given to orientees throughout the orientation period. The formula used was:

Materials/items X Cost/item X No. of orientees.

Traditional programs with 56 orientees, listed cost at $873.50. Competency-based programs with 29 orientees listed cost at $121.50, less than one-half the cost for the same number of orientees in the traditional programs. This supports the competency-based instructors' claims that once the initial cost of program development is absorbed, session cost is minimal.

Program Development Cost

This phase included cost of preparation time, production, equipment, space, and overhead. None of the staff development directors in this study had a record of identifiable direct cost for development of their orientation program. Most of the expense was considered 'hidden cost' time for instructors, print shop cost or photocopying for orientation or program materials.

Several directors were hired into the present system and did not have access to records with time and cost to develop the existing orientation programs.

Since the reasearcher was unable to determine this cost, a list of time frames for preparation of self-learning units, equipment, space, etc., required for transition from traditional to competency-based programs will be included in the complete study.

Conclusions

Conclusions based on data collected thus far are as follows:

a) Both groups rated clinical experience, preceptors, and teacher demonstration as the preferred method of learning.

b) Orientees completing traditional orientation rated themselves highly competent in: Coordination of homegoing instructions and follow-up, leadership skills, decision making, and nursing skills related to respiratory care.

c) Orientees completing competency-basd orientation rated themselves highly competent in: formulating care plans, procedural skills, equipment skills, and interpersonal skills.

d) Competency-based orientation cost twice as much as traditional for new graduates and experienced registered nurses.

References

Benner, P. Issues in competency-based testing. Nursing Outlook, May, 1982, pp. 303-307.

del Bueno, D., Barker, F. & Christmyer, C. Implementing a competency-based orientation program. JONA, 1981, February, 24-29.

Everson, S. Panoc, K. Pratt, P., & King, A. Precepting as an entry method for newly hired staff. Journal of Continuing Education In Nursing, 1981, 12, 5, pp. 22-26.

Hart, M. Competency-based education. Journal of American Dietetic Association, December 1976, 69, pp. 616-620.

Knowles, M. The adult learner: a neglected species. Houston: Gulf Publishing Co., 1973.

Monjan, S. & Gassner, S. Critical issues in competency-based education. New York: Pergamon Press, 1979.

Pollock, M. B. Speaking of competencies. Health Education, January/February 1981, pp. 9-13.

Rinke, W. Competency-based education. Journal of American Dietetic Association. Research, March 1980, 76, pp. 247-252.

Smith, H. L. Staff development: determining its value. American Health Care Association Journal, July 1982, pp. 9-14.

Spady, W. & Mitchell, D. Competency-based education: organizational issues and implications. Educational Researcher, February 1977, pp. 9-15.

Home IV Program: A Collaborative Effort to Contain Costs

by Connie May, RNC, MS
Coordinator, Nurse Discharge Planning
Miami Valley Hospital, Dayton, OH

Today, the trend toward cost containment is a critical strategy for survival in the health care delivery system. In this increasingly complex economic climate, hospitals are being forced to control escalating health care expenditures. These forces include enactment of federal legislation and pressures from business leaders and health care coalition groups for health care cost effectiveness. The coordination of services between hospital and home can provide financial incentives to assure efficient use of health care resources.

A collaborative model will be presented, which has been developed to facilitate early discharge from the hospital, for those patients requiring prolonged intravenous antibiotic therapy. A safe and effective mode of treatment for this patient population will be described. Substantial cost savings have been realized in this model. This paper will begin with a discussion of the implications of current health care legislation, in relation to discharge planning.

During the last year, the acronyms DRG and TEFRA have become familiar terms to the providers of health care. It had been predicted that when health costs reached 10% of the gross national product (GNP), the government would step in to control rising health care costs. In October 1982, when health care expenditures actually rose to ten percent of the GNP, the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982 was born.

TEFRA represents a radically new method of reimbursement to hospitals for care delivery to Medicare Patients. This method replaces the present sysem of retrospective reimbursement. The Medicare prospective reimbursement system will be phased-in over a three year period, effective for hospital fiscal years beginning on or after October 1, 1983 (Hospital Financial Management, 1983).

During this phase-in period, each hospital's payment rate will be based on a weighting between its cost based rate, and national and regional diagnosis related group (DRG) rates. Hospitals will recieve a flat payment based on the patient's diagnosis. Rates will be set in advance for each of the 467 DRGs.

The author wishes to acknowledge Betty Adams, RN and Noreen Trout, RN of Nursing Systems, Inc., for their initiation, collaboration and support of this program.

Basically, under this prospective reimbursement system, if a hospital spends less to treat a patient than the DRG allowed, it keeps the difference. If it spends more, it absorbs the costs (American Journal of Nursing, 1983). Under this plan prospective reimbursement is designed to cut costs by changing the incentives for hospitals.

With the cap on the payment, hospitals may receive less than their charges for longer patient stays. Therefore, it will become a priority for every patient to attain the earliest possible discharge time (Cahill, 1982, p. 14). Reducing length of stay, a usual outcome of home health services, is a key strategy for holding down expense increases (Jordan, Doll, & Carpenter, 1983, p. 15). In this respect extension of health services from the hospital into the home can offer financial advantages in containing costs.

Some hospitals have found that they can significantly shorten lengths of stay without adversely affecting quality of care by discharging patients to home IV therapy programs (Hospital Peer Review, 1983). In a review of the literature one of the most frequent documented home IV therapies is that of home IV antibiotic maintenance. Traditionally, parenteral antibiotic treatment of serious infections has kept patients in the hospital for up to six weeks after the acute phase of their illness (Poretz, Eron, Goldenberg, et al., 1982).

Several studies have reported the feasibility of home administration of parenteral antibiotics, particularly for infections such as osteomyelitis and endocarditis (Antoniskis et al., 1978; Kind et al., 1979; Stiver, et al., 1978). These studies document the safety, efficacy, and cost savings of home antibiotic therapy. Inherent factors which were highly emphasized in these studies were patient selection, education, and supervision after discharge from the hospital.

At Miami Valley Hospital, a 772 bed nonprofit regional referral center, we have developed a home IV program which parallels these existing studies. During a seven month period, ten hospitalized patients undergoing IV antibiotic therapy for treatment of osteomyelitis, were identified as potential candidates for this program by the physician specializing in infectious diseases. Those patients identified by the physician were clinically stable, with the primary rationale for continued hospitalization being the need for IV antibiotic therapy.

Patients and their families were then screened by the nurse discharge planner, and selected for the home program. The nurse discharger planner (NDP) performed a holistic assessment of the patient and family, with input from the health care team. One family member was identified as the primary caregiver, who would administer the IV antibiotic. The caregiver was assessed in terms of ability to perform the procedure, cooperativeness, and consent to assume responsibility for care of the patient at home. Information was provided to the patient and family of the overall program by the

NDP. Consent was obtained from the patient and family to investigate insurance coverage for this program. The NDP contacted Travacare Service of Travenol Laboratories, which assured the delivery of antibiotics and ancillary supplies to the patient's home. Travacare also performed the reimbursement investigation for coverage of outpatient medications.

Multidisciplinary involvement is an integral component of this program. The nurse discharge planner provides leadership for the multidisciplinary discharge conferences to plan the patient's care. These conferences are attended by the primary nurse, physician, pharmacist, social worker, home health nurse, clinical nursing coordinator, and other health professionals as indicated. At this time, the teaching plan is developed, and discharge date is tentatively set. Functioning as a team, we collaborate with all disciplines throughout the patient's hospitalization.

The primary nurse takes responsibility for instructing the patient and family in the aseptic technique during antibiotic administration, adverse reactions of the prescribed drug, care and complications of the IV cannula, and the mechanics of IV antibiotic administration.

The local home health agency, Nursing Systems, Inc., provides daily visits by a registered nurse after discharge. This agency provides comprehensive home health care services, with 24 hour availability to meet the needs of home IV patients. The home health nurse makes a predischarge visit to the patient during hospitalization, and provides a patient instruction booklet about the home IV program to each patient.

The physician remains in close contact with all staff members to finalize discharge plans. Once the physician determines the medications to be administered at home, the NDP relays this information to Travacare. A standard check list has been developed to facilitate the ordering of ancillary supplies necessary for home use.

Results

During a seven month period from October 1982, to April 1983, ten patients were discharged on the home IV program. Eight patients were male and two were female, ranging in age from six years to eighty years old. All patients had family assistance at home. Two children in this study had very supportive parents, eager to care for the children at home.

The mean duration of home therapy was 18.2 days, with a range of 8 to 30 days. Antecedent hospital treatment averaged 22 days with a range of 11 to 38 days. The antibiotics used at home included Claforan, Mefoxin, Cefabid, Nafcillin, Oxacillin, and Mezlin. Eight of these patients administered the medications on a six hour schedule, while two patients were on a twelve hour schedule. It was interesting that even the every six hour schedule of administration was not a factor in the family's decision to

participate in this program. To the family the advantages of being at home, far overweighed the inconveniences.

There were no major complications during this therapy. Thrombophlebitis occurred in several cases, which necessitated more frequent IV cannula changes. According to protocol the IV catheter site was changed every three days. This complication was not serious enough to require hospitalization, nor cessation of the IV therapy. One patient did not complete the recommended length of therapy, related to noncompliance. In retrospect, this patient was not a "good" candidate for home IV therapy. During his hospitalization he had left the hospital against medical advice twice within a twenty-five day stay. The home health nurses collaborated with the physician as soon as the problem of noncompliance was identified. This case demonstrated the need for careful screening of patients for this program.

Cost Analysis

The average cost of home IV antibiotic therapy per day is $209. In comparison, in this patient population the mean hospital charge per day was $410, (see Figure 1). The home IV charges included an average of $62 per day charge for home health nursing and $147 per day charge for medications and supplies. Thus the average savings per patient was $3,658 for 18 days of home IV therapy, as compared to hospital treatment.

These findings are comparable to the existing studies. (Kind et al., 1979) demonstrated a savings of $1,619 per patient, while (Antoniskis et al., 1978) found $3,700 saved per patient. In this study 182 patient days were saved, as a result of this early discharge program. Estimated total savings for this home IV program for these ten patients were $36,582, (See Figure 2).

These findings have far reaching implications in view of the prospective reimbursement system. The hospital will realize a savings by reducing the length of stay for these patients requiring long-term antibiotic, and will free up beds for patients requiring more intensive and more costly levels of care. Even in those hospitals experiencing low occupancy, advantages exist because higher revenues can be realized from open heart surgery stay than from a stay for antibiotic maintenance (Jordan, 1983).

In this study reimbursement under the patient's insurance coverage ranged from 80% to 100% coverage. Currently, Medicare provides limited coverage for outpatient medications, but 100% for home health skilled nursing visits. Four patients in the program had Medicare coverage, in addition to insurance which picked up the remaining costs. In one case a commercial carrier agreed to 100% coverage of costs, only after the NDP explained the total cost savings to the company.

In addition to cost savings, another important factor demonstrated was patient and family satisfaction with the program. Patients and their fami-

Average Cost Comparison

Home Therapy
per day $209

Hospital
per day $410

FIGURE 1

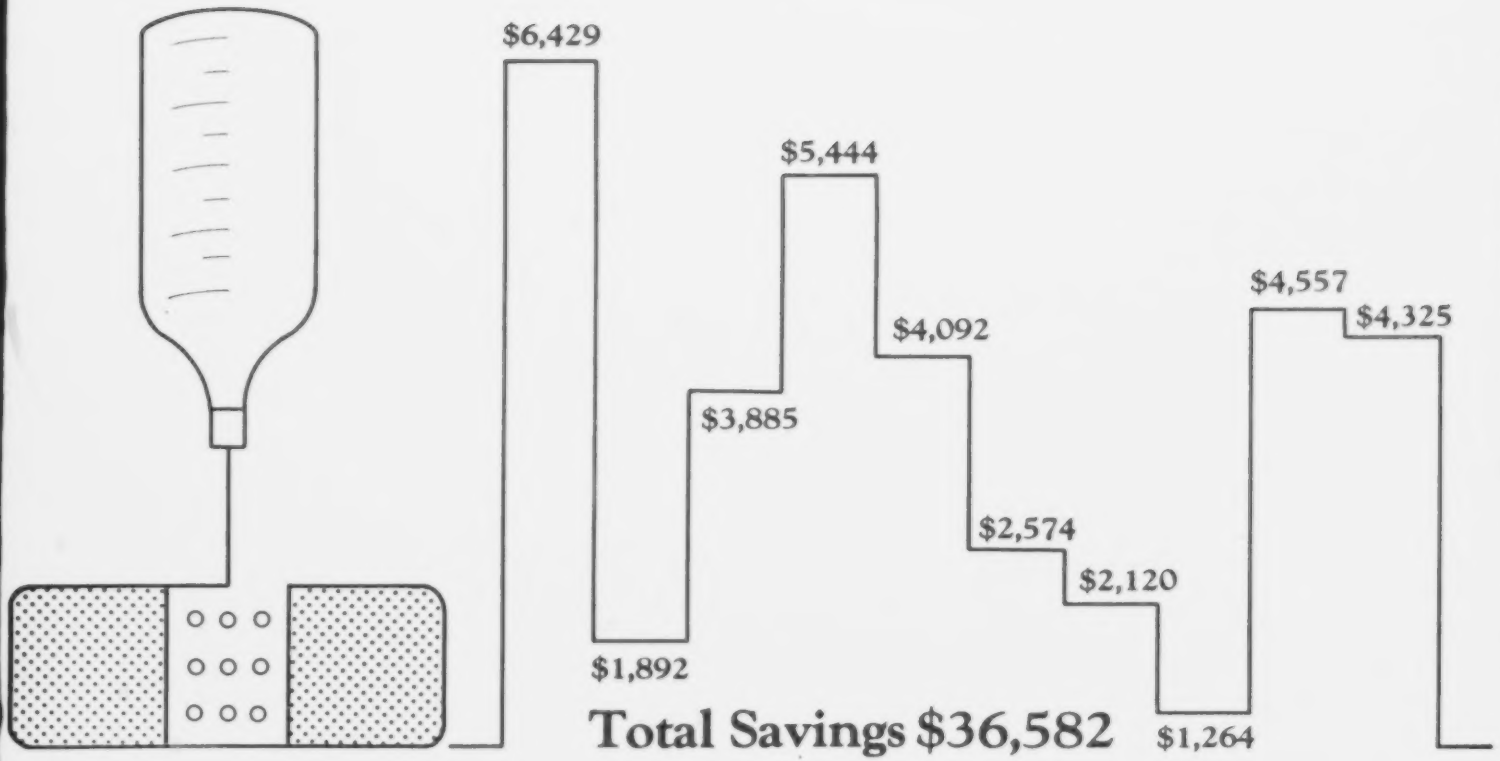
143

153

154

FIGURE 2

Savings per patient



Total Savings $36,582

lies adapted relatively easily to the routine at home. The involvement of the patient and family in the care provided at home demonstrated the success of this program. At home, the patient can function more independently, and resume daily activities.

Discussion

During this relatively short period of time, the home IV program has shown enormous social and economic benefits. The program has proven to be a safe, effective mode of therapy. Cost savings were substantial, although reimbursement limitations were identified. Consumer and community education of this alternative mode of therapy is warranted, and may produce changes in the reimbursement coverage.

As hospitals are forced to control rising health care costs, this home IV program can provide a mechanism to facilitate those endeavors. This objective can be accomplished without adversely affecting the quality of care provided. With the success of this program it could be projected that other home IV programs such as hyperalimentation and IV chemotherapy could also be utilized. Support of the program from the multidisciplinary team is imperative, in order to achieve these results.

References

1. American Journal of Nursing (Eds.). Prospective reimbursement to be in effect this year for medicare. 83:697, 710, May 1983.

2. Antoniskis, A., Anderson, B. C., Van Volkinburg, E., et al. Feasibility of outpatient self-administration of parenteral antibiotics. Western Journal of Medicine 128:203-206, March 1978.

3. Cahill, F. Prospective reimbursement: Its effect on discharge planning services. Discharge Planning Update 3:14-16, Fall 1982.

4. Hospital Financial Management. Congress passes medicare prospective payment. 13:1-3, May 1983.

5. Hospital Peer Review. Home IV programs cut LOS without adverse effects. 8:29-31, March 1983.

6. Jordan, L.R., Doll, A.B., and Carpenter, D.J. Home health care. American Journal of Intravenous Therapy and Clinical Nutrition, 10:9-17, February 1983.

7. Kind, A., Williams, D., Persons, G., and Gibson, J. Intravenous antibiotic therapy at home. Archives of Internal Medicine 139:413-415, April 1979.

8. Poretz, D., Eron, L., Goldenberg, R., et al. Intravenous antibiotic therapy in an outpatient setting. JAMA 248:336-339, July 16, 1982.

9. Stiver, H., Telford, G., and Mossey, J. et al. Intravenous antibiotic therapy at home. Annals of Internal Medicine 89:690-693, November 1978.

Cost and Benefits of Health Care Cost Containment

by Edward P. Ehlinger, MD, MSPH

Over the last 20 years there has been increasing concern and anxiety over the rising cost of health care in the United States. National expenditures as a percent of our Gross National Product have increased from 7.6 percent ($74.7 billion) in 1970 to 10.5 percent ($322 billion) in 1982 with a continued increase projected for the future. The concern with this steady increase is that it is affecting our contributions to other necessary components of our society, such as education, transportation, and the arts. Unless health care cost are controlled our overall quality of life may be jeopardized.

Reasons for Cost Escalation

Several factors have contributed to this cost escalation. Inflation has been a major contributor, but not the only one since the medical share of the Consumer Price Index has continued to rise faster than the other components.

The changing demographics of the United States is another factor. Presently over 11 percent of our population is over age 65 and the proportion is continuing to increase. The elderly consume more health services than other age groups. In fact, they spend about 3 times as much on health care as the rest of the population.

Increased access to care fostered by the 1965 Medicare and Medicaid Amendments to the Social Security Act has had a tremendous impact on national health expenditures. Obviously this social policy decision of the 60's has had both positive and negative results.

In addition, new but costly technology and procedures have expanded the scope and intensity of health care services available to all people. Technology has often been touted as a means of controlling costs but this is true only when we are dealing with a "complete" technology, that is, something that can prevent or eliminate a problem. Immunizations and passenger restraints in automobiles are good examples of a complete technology. Most of our recent technological advances such as CAT Scans, respirators, and transplants are "halfway" technologies that focus only on diagnosis of diseases and treatment of symptoms.

Finally, lack of price competition has been implicated as a major factor in stimulating escalation in health care costs.

Regulatory Attempts to Control Costs

Recent attempts to control health care costs have been multiple and varied. Initial efforts focused on regulatory approaches such as: HSAs, PSROs, Certificates of Need, cost capping, rate setting, limits on length of stay, utilization review, second opinions, and pre-admission screening.

These efforts attempted to curb health care costs within the existing health care structure; no major system changes were attempted.

A major criticism of these approaches is that government control and regulation have stifled private initiative and innovation, and that these regulations have burdened the system with bureaucratic red tape that insures inefficiency. The most demanding criticism of the regulatory approach, however, comes from the figures on expenditures for health care. From these, it is evident that regulation has not been totally successful; expenditures have continued to rise. The major explanation is that these approaches fail to address the policies that not only insulate consumers and providers from the costs of health care, but also actually provide potent disincentives for the efficient use of resources.

Some of these policies include:

1) Tax deductions for employer contributions for health care coverage and non taxation of employee health benefits;

2) Tax free bonds for hospital construction;

3) Insurance bias in favor of inpatient care;

4) First-dollar coverage of health care costs with no cost-sharing by the patient;

5) A ban on advertising;

6) Multiple barriers to providers' entry into the health care field;

7) Decisions regarding patient care made by providers with no financial risk for the decision; and

8) Reimbursement for costs on a retrospective basis.

Competitive Approach to Cost Control

Stimulated by the failure of the regulatory approach to satisfactorily control expenditures, and encouraged by the shifting responsibility for the country's health and welfare from the public sector to the private and voluntary sectors, the concept of competition in health care has emerged. The core of the competition model is that consumer choice and market forces rather than governmental regulation should be used to control health care costs. The focus is on influencing individual choices--choices based on costs--in the hope of changing the entire health care system. The most important components of the competition model are:

1) Consumer choice among multiple competing health insurance and health care plans, with freedom to move from one plan to another through various forms of open enrollment;

2) Full consumer knowledge of the services to be purchased;

3) A fixed dollar subsidy for all health care plans by an employer or the government, e.g. payments for insurance by an employer, or vouchers for Medicare or Medicaid;

4) Responsibility for cost-sharing or saving shared by the consumer;

5) A supportive tax structure to insure compliance with fixed dollar subsidy and tax exemption only for the fixed dollar subsidy;

6) Organization of providers into competing economic units in order to provide minimally comprehensive services;

7) Ease of entry for all providers, and competition at all levels of service; and

8) Uniform rules to govern competing units; competition would be through cost and level of services, not through collusive behavior.

The influence of the competitive approach is evidenced by the development and expansion of HMOs, PPOs, IPAs, primary care networks, health care coalitions, and alternative health care delivery systems which are geared to function in a competitive marketplace. The advent of DRGs will further stimulate the development of new delivery systems.

Benefits of Competition

Proponents of competition expect at least five major benefits to accrue from a competitive health system.

The first benefit of a competitive system is that it will encourage cost efficiency and cost effectiveness because both providers and consumers of health services will be at economic risk, either through loss of patients or cost-sharing requirements.

Second, the cost sharing by consumers is expected to lead to an overall decrease in the use of health services and, thus, reduce overall health care costs. This idea stems from the basic economic theory behind the competition model which is to focus on the demand side of the supply/demand curve with the objective of reducing overall demand.

Third, the competition model will encourage the development of alternative health care delivery systems such as HMOs, IPAs, and PPOs that have the potential to provide high quality health services in a cost efficient manner.

A fourth benefit would be that cost efficiency would be the major determinant of whether or not providers would remain in business.

Finally, the competition model would encourage private initiative and innovation. We've had competition in the past but this competition has been based on comprehensiveness of benefits and quality and convenience to the consumer, not on price. Now, in addition to seeing an increasing number of house calls and longer office hours, we are seeing new service delivery mechanisms like free-standing surgical and emergency centers that use price as a major promotional point.

Risks of competition

Despite the claims of its advocates, a competitive system has some limitations. Some of these are inherent to the model itself and others are potential problems. An obvious limitation is that while this model calls for consumers to have "full knowledge of the services they purchase," studies have shown that most people have little knowledge of the health services that are potentially available to them. What they know best are the services they have used--those involving high technology and hospital and physician-oriented care. Changing this long-engrained orientation will be difficult.

Also, adverse selection and "skimming" have been identified as potential problems in the competitive system. These problems could take several forms. Individuals with complex or chronic health problems will rationally choose more comprehensive health care programs. Costs for these programs may rise and subsequently be transferred back to the patients. Thus, there may be steadily increasing costs, possibly to the point where they are not affordable for those who most need the services. Conversely, some providers may enroll only low risk/low cost patients. This will allow them to keep rates low, but potentially will exclude those most in need of health services such as the poor, the disabled, minority groups, urban ghetto and rural residents, and those with poor medical histories.

An all out competitive system may have some dire consequences for the poor. Since they have limited ability to cost share, a low, fixed dollar subsidy (either through private insurance or government programs) will give providers no incentive to compete for this group. The recent experience of providers closing their doors to the poor as Medicare and Medicaid reimbursement levels decline has grave implications for the competition model.

The poor have had problems competing for health services even under our present system that provides some government assistance. What will happen to them under a purely competitive system is unknown, but it is likely that some hard-won advances in their health status may be lost.

Another potential limitation is that not all providers may be able to compete on even terms. This is particularly true of public health agencies that serve a large number of low income individuals. They have some constraints that put them at a competitive disadvantage:

1) The geographic boundaries imposed on most public health agencies often limits their ability to achieve efficiency of scale and generate a broader base for support and funding.

2) Restrictive civil service programs under which many public health agencies must operate often limits their flexibility in attracting and promoting key personnel.

3) Governing boards consisting of elected officials, sometimes allow political influence to affect the direction of public health programs and make longterm planning difficult.

4) Politically powerful groups such as hospitals, clinics, and medical societies may often perceive only a limited role for public health agencies. Any expansion of public health programs is often seen as inappropriate, especially when it includes generating some income.

5) They serve high risk populations that few other providers can or want to serve. This adverse selection tends to keep their costs high.

Another major limitation is that teaching and research do not fit into the competition model. These are expensive components of our present system, to be sure, but they enhance the quality of the services and provide multiple future benefits. Providers will not incorporate these components into their service package if it will weaken their competitive position.

Competition may lead to the overuse of unproven technology in order for providers to stay competitive. A good example of this is the untold millions of dollars that were spent on coronary artery bypass grafting before any good studies were done on its limitations or benefits. The competition model may encourage repetition of that scenario. On the other hand, DRG's and prospective payments may discourage the use of appropriate technology.

Another concern about health care competition is that the emphasis has been mostly on hospital care and private sector medicine, with little discussion of its extension into other health care sectors and programs.

A final concern is that the competition model focuses on costs, not quality or access. Many see this as a shift from the professional to a commercial ethic in health care. This is the major reason why many people are worried about the prospects of a totally free market health care system. They believe that government regulation and control in some form

will still be necessary, not only to maintain quality care, but also to assure access to health services for all.

These concerns are not just theoretical; they are based on past experiences. In the late 19th century an uncontrolled and unregulated free market system fostered much fraud and abuse among medical providers. The resultant morbidity and mortality prompted the enactment of licensing laws and health regulations along with the development of public health programs, at the federal, state and local levels. These were all developed to assure high quality health care.

The 1960's brought another form of government intervention into the health care system. At that time it became evident that many people in this country were not sharing equally in the benefits of our health care system. Restricted access to services was a major problem in our private enterprise system. Medicaid, Medicare, Neighborhood Health Centers, and multiple other programs implemented at that time had a tremendous effect on improving access to care and or improving the overall health of the population.

There is a justifiable fear among many people that a retreat by the federal government from responsibility for the nation's health and welfare will lead to serious problem with quality, access, and equity in our health care system.

Crisis in the Health Care System

Presently the United States health care system is located somewhere between the extremes of national health service and a totally free market on the regulation-competition continuum. Because there are potential problems with each of the extremes, most people are trying to determine how to mesh the best components of each model to assure a high quality health system that is cost sensitive and accessible to the entire population.

How this is going to be done is unclear at this time. However, what is clear is that the United States health care system is at a critical stage in its development. The high level of expenditures for health care is forcing some changes upon the system.

This situation has been characterized as a dilemma which means "choosing between equally unfavorable alternatives." Rather, it should be viewed as a crisis which means a "turning point." Like the Chinese symbol for crisis which contains the characters for danger and opportunity, the crisis in the United States health care system contains both danger and opportunity. The direction we go will depend on decisions made now and in the near future.

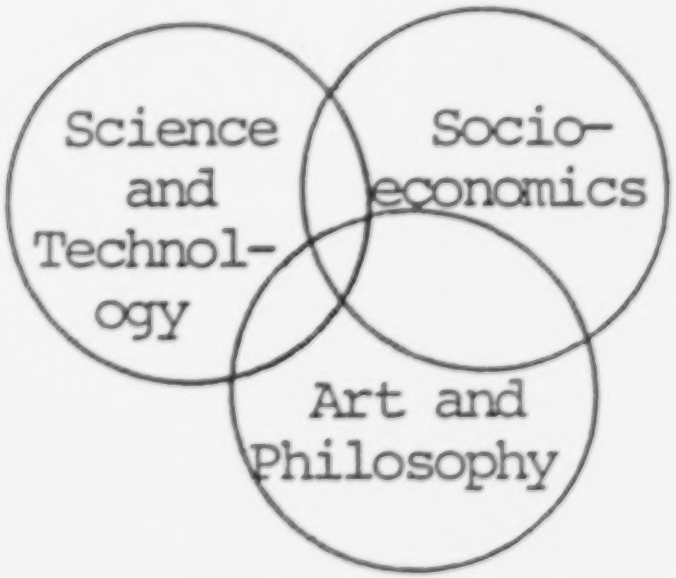
The biggest danger of the present crisis is that people may try to resolve it by focusing solely on the economic aspects of the health care system. Although rising health care costs precipitated the crisis, many other factors contributed to its development. In order to resolve this

crisis, these other factors must also be considered. To do this we need a framework that includes all components of our health care system.

One such framework conceptualizes health care in terms of a Venn diagram with art, science and economics forming its major parts (Figure 1).

We are accustomed to dealing with only one or at the most two components at any one time and too often it is the economic circle on which we focus. In order to fully understand the system we must examine all components and their interactions. We need to expand the area of overlap and focus our attention on that congruent area.

Figure 1



Need for Priorities

This comprehensive approach to the health care system will allow us to sort out the basic problems of our system. What I am convinced will come from this analysis is the realization that our specialist approach to health care has focused on the secondary manifestations or symptoms and has overlooked basic structural problems. The structural problems are not related to regulation or competition or even to costs. The major structural problem in our system is the lack of clearly defined priorities. We don't know what we want from our health care system.

The recent constraints on the amount of money available for health care is forcing us to set some priorities. But if these priorities are determined only on the basis of expenditures we will again be going off in the wrong direction. We need to include the philosophical and scientific components of our health care system with the economic ones. Only then will we be able to articulate a rational set of priorities.

Given the current technology, our limited resources, and the philosophical base of our nation, what will be our priorities for health: prevention or treatment, cost or quality, children or elderly, physicians or other professionals, hospitalization or home care, public or individual health, regulation or competition? These are few of the issues that need to be addressed--but not in the "either-or" fashion in which they are stated and in which they have been addressed in the past. These are obviously "both-and" issues that can be resolved only through a population-based approach. This public health approach which considers our resources, our technological capabilities and our societal goals is markedly different from the way priorities are currently set, but given our finite resources it is the only way we will be able to achieve the most beneficial health outcomes for the greatest number of people.

Finally, once we establish our health system priorities, we must then consider health care in the context of our total society. This is a longer term process, but one that is necessary in order to make some rational decisions about the future of our health system.

We need to compare health to other societal needs such as education, transportation, commerce, agriculture, and national defense. Only then will we be able to determine the true costs of our health care system and not just expenditures.

We will be able to demonstrate that health, or lack of it, affects all aspects of our society directly. It also will become evident that these areas do not function in isolation and that collaborative efforts will greatly facilitate the accomplishment of all national goals. Finally, this comparison will facilitate the setting of overall national priorities. We will then be able to answer the question, "how important is health care?"

The cost of health care is the symptom that has brought us to a crisis situation--a turning point in our health care system. We can deal with this crisis by focusing on the symptoms, and hoping that the underlying disease is self-limited. Or, we can seize this opportunity to examine our entire health care system and how it relates to the rest of society's needs. We can then rationally set some priorities and go about building a health care system that meets the total needs of our society.

Collaborative Group Education: A Cost-Effective Alternative

by Kathleen A. Baldwin, RN, MSN
Betty Boesen, RN, BAN
Barbara R. Jones, RN, BNS

Home health visits are major mechanisms for the provision of public health nursing service to the client. The advantages attributed to home health visits include convenience to clients and their families in situations which they control, and access to clients who are unable to travel to other sites. The major disadvantage, however, is of prime import to public health personnel at the present time. That disadvantage is cost. Home visit costs include travel, time wasted in uncompleted visits and decreased efficiency that come when only one client or family can receive attention at a time.

Families in the child-bearing years have been and are a major focus of public health nursing. Funding sources for such programs have changed and the available health care dollar must be spent more efficiently to supply the best care to the largest number of people. Barkauskas (1983) states that instruction appears to be the primary intervention of public health nurses with well mothers and infants. However, one-to-one teaching is a very expensive instructional modality.

With the above in mind, the purpose of this paper is to describe a collaborative project between the Peoria City/County Heath Department and Friendship House of Christian Service, an inner city community center. The project was conceived by the two agencies in the fall of 1982 in an effort to improve pregnancy outcomes and parenting skills of area residents and provide a cost-effective alternative to public health nurse home visiting. Toward this end a young mothers' club - The Wednesday Morning Mothers' Group - was formed to provide these women with an opportunity for self-help through peer support and education.

The Young Mothers' Group began in October of 1982 with three mothers in attendance. Although 150 mothers have attended the group at least once in the past eleven months, a core group of 35 others attend regularly. Most of the women have children under age 5 years, or are expecting their first child. The mean age of the mothers is 25 years, although ages range from 15 to 50.

Weekly group activities include: 1) breakfast - provided by the center, but prepared by the young mothers; 2) cooperative babysitting; 3) educational programs on health, parenting, crafts and employment skills; and 4) a thrift closet with free layettes. The public health nurse currently provides group education on health and parenting issues and individual counseling on site to mothers requesting this service. Examples of issues discussed in group sessions include the birthing process, infant and toddler car safety, parents as sex educators, infant feeding, and toilet training a toddler. As the program has grown, additional community agen

cies such as Planned Parenthood Association, University of Illinois Expanded Nutrition Program and Crisis Nursery, as well as church volunteers have assisted with programs and donated materials.

Beginning evaluation of the nursing portion of this program shows it to be extremely cost effective when compared with the traditional one-to-one in-home nursing visit. To examine the effectiveness of the nursing component, an instrument adapted from a study of McNeil and Holland (1972) addressing home visit versus group teaching client outcomes was used. The McNeil and Holland tool consisted of a series of vignettes designed to evaluate the participant's knowledge of basic health care.

The final tool consisted of twenty vignettes consensually validated by ten maternal child health supervisors and educators. This instrument was administered to eleven women participating in the Wednesday Morning Mothers' Group (experimental group) and to eleven women who had been taught similar parenting content, but who had been followed only through home visits (control group). Potential differences in teaching approach were controlled by using the caseload of the same public health nurse for both home visit and group content. In both groups, the client receiving the instrument was either pregnant at that time or had delivered a baby within the past six months.

The vignettes were scored by awarding points for each response in accordance with the responses of the experts in maternal child health. Under this system, the highest possible score was 174. Table 1 shows a comparison of the experimental and control groups by test score, age, number of children and educational level. Means, standard deviations and t values are given. The only significant difference ($P < 0.5$) between the two grops occurred in test score outcomes. Group teaching produced better client outcomes than home visits.

Table 1

Comparison of Experimental and Control Groups by Means and Standard Deviations

Variable	Experimental Group		Control Group		t Value
	Mean	S.D.	Mean	S.D.	
Test Score	133.9	13.13	118.3	17.62	2.360*
Age	24.9	7.74	21.2	4.60	1.373
Number of Children	2.4	1.43	2.7	1.49	0.583
Educational Level	10.8	1.54	9.6	1.91	1.598

*t test of difference between means significant at alpha = .05 level. n=11 in both experimental and control groups

The public health nursing cost of providing both group and home visiting services was also examined. Costs per client contact were figured from records kept for client home visits and group contacts. Preparation hours were included in the costs for both group contact and home visits. Findings confirmed the agencies' initial premise that group education is a much less costly instructional modality than traditional individual in-home contacts. Costs for group nursing service were 89 percent less per mother contact than the costs of providing individual home visits.

This beginning evaluation of the Health Department's experiment in collaborative group effort shows it to be both more effective and less costly than the more traditional home visits. Because the sampling outcomes to date are limited to twenty-two clients, more extensive evaluation is planned to further corroborate these initial findings.

References

Barkauskas, V.H.: Effectiveness of public health nurse home visits to primiparous mothers and their infants. AJPH, 73 (5): 573-580, 1983.

McNeil, H.J. and Holland, S.S.: A comparative study of public health nurse teaching in groups and in home visits. AJPH, 62 (12): 1629-1637, 1972.

Stine, O.C. and Chuaqui, C.: Mother's intended actions for childhood symptoms. AJPH, 59 (11): 2035-2045, 1969.

Work Study - A Management Tool

by Christine Gelb, RN, MSN
Virginia Richardson, RN, MSN, CPNA

As summer approached, our pediatric nursing units were facing perennial problems of increased summer census and patient acuity, new graduate nurses who lacked confidence in their clinical skills, several staff vacancies, and the need to provide vacation coverage. In previous summers the short-term solution had been to use staff overtime and outside agency nurses, neither of which had proven very satisfactory. Our own staff became over-worked and over-stressed, continuity of care suffered, and the cost in salaries was prohibitive.

In considering alternatives, the decision was made to develop a summer work study program for senior nursing students. While a number of such programs exist throughout the country, most did not seem to provide adequate faculty supervision, clinical experience, or work schedules to meet the needs of our nursing service.

The program needed to be structured to enhance students' clinical skills and confidence as they put into practice concepts and principles emphasized in educational programs. Additionally, the work study program needed to provide cost-effective, quality care and serve as a potential recruitment/retention tool. We hoped that through collaborative effort the goals of both nursing service and nursing education could be met.

A summer work study course in pediatrics for nursing students was developed between Methodist Hospital, a large, private, teaching hospital and Indiana University School of Nursing Baccalaureate Program. This elective, three credit-hour course, combined faculty-supervised clinical experience on day and evening shifts and staff-supervised work experience on day, evening, and night shifts for eight weeks, including holidays and weekends.

Educational Objectives for the Program were to:

1. Increase students' competence in assessment, communication, and psychomotor patient care skills.

2. Increase students' skills in providing teaching and psychological support to children and families.

3. Increase students' organizational skills in managing a group of patients using the nursing process.

4. Increase students' knowledge of the realities of the work environment.

Service objectives for the program were to:

1. Provide quality care and adequate staff during high census/high acuity summer months.

2. Improve working relationships between nursing staff and students.

3. Provide potential recruitment source of senior students and new graduates.

4. Improve future retention rates by producing new graduates who are familiar with the work setting and nursing service philosophy.

The nine students selected had successfully completed their junior year. The students were hired by the hospital and were considered full-time employees accountable for forty hours of work per week. They were assigned to a nursing unit based on the age group with which the student wanted to work and the number of students the unit manager could utilize effectively.

The weekly instructor-supervised clinical component of the course included sixteen hours on the units and a twohour seminar. During their clinical time, the students cared for a group of two to four patients depending on the patient's complexity. The students spent the remaining twenty-two hours of "work time" on their assigned units functioning under a job desription more limiting than their roles as student nurses. For example, they could not administer medications or work with IV's and were limited as to treatments they could perform. The students were assigned to work with an RN and had patient care assignments of from four to eight patients during "work time".

A weekly seminar was held at a regularly scheduled time and was student-led with input from the faculty member. Seminar content ranged from preoperative teaching to anorexia nervosa. The seminars also provided a forum for students to identify, process, and often resolve normal problems and concerns of the work environment. The topics discussed included nursing decisions made by staff members, personalities of staff members and how to deal with them, working with difficult patients, death of a patient, and other realities of working day-to-day.

The students also wrote self-evaluations every two weeks citing examples of initiative in selecting assignments, psychomotor patient skills, organizational plans and communication skills. This was designed to encourage students to look at their behaviors, identify areas of needed improvement, and begin to work in those areas.

Program Evaluation

At the completion of the work study program, students, nursing staff, and nursing managers completed a written survey. The survey was developed to evaluate various aspects and effects of the program including orientation, effects on patient care and families, relationships between staff and

students, student work schedules, and personal benefits. Data were also gathered related to cost containment.

Cost-Effective Quality Care

The primary purpose was met by providing care in a cost-effective manner. Management, staff, and students indicated they believed a high level of care was delivered as a result of this effort. Patients and families echoed this opinion when interviewed. In addition to quality physical care, many vital interventions such as patient/family teaching, play therapy and crisis intervention also occurred because staff and students worked together over an extended period. The cost-effectiveness of the project was obvious as staff overtime decreased 69 percent from the previous summer and use of outside agency nurses decreased 83 percent.

Student Skills

At the beginning of the course the student felt inadequate in psychomotor patient care skills such as IV's, administering medications and some treatments. After the completion of the course, it was readily apparent to students, staff and the faculty members that the students were more comfortable with these skills.

In previous junior year courses the students had been responsible for the care of one patient at a time. By being assigned to multiple patients, the students learned to plan their time, set priorities, and be flexible when the unexpected occurred. They also became more skilled in patient and family teaching and providing psychological support as needed. The students became more competent in assessment of patients and families, and in using the communication skills they had learned as sophomores.

The students and faculty member evaluated the students as they accomplished the educational goals for the course. It was evident to the students, staff and faculty member how much more skilled the students were at the completion of the course.

Staff/Student Relationships

Both written surveys and direct observations attested to the positive effect of the program on the relationships between staff and students. At times in the past, students had only been tolerated by the staff, but now they were veiwed as co-workers and assets to the unit. Staff were willing to invest more time orienting students and developed more understanding of the students' conceptual educations. Staff noted that students, although lacking clinical skills initially, were capable of learning these quickly because principles were understood.

Recruitment/Retention

It is hoped that the longer-term goal of recruitment and retention will be met when these students graduate next year. It is certainly en-

couraging that six of the nine students have remained employed part-time during their senior years. These are potential staff nurses who have improved clinical skills and confidence, exposure to the demands and realities of the work environment, understanding of the philosophy of our nursing service, and a staff support system. If the students remain in our institution following graduation, the experiences of the work study program may then contribute to retention of these employees and thus an additional cost saving.

Recommendations:

The work study course was received enthusiastically by staff, students, families and patients, and they all recommended that the course be offered the following summer. As with any new program, areas needing improvement became apparent as the summer progressed. The following were areas of concern expressed by the students, nursing administration and the faculty member:

1. The surveys the students filled out indicated the orientation program needed to be changed. Less emphasis should be placed on reviewing basic skills already possessed by the students and more information included about the hospital's forms and routines.

2. Three students were dissatisfied with the limitations of the student assistant job description during "work time" and elected to work in other hospitals as senior students after the completion of the course. Re-evaluation of the "limited work time" job description will be conducted.

3. Staff preceptors were not utilized in the initial course because the preceptor program had just been implemented. In future work study projects, preceptors will be used to give the students an identified staff person with whom to work. Presumably, preceptors would help the students feel more comfortable sooner in the clinical setting. Using preceptors may also enable us to expand the students' "work time" job functions.

4. Often students were required to work two different shifts per week depending on their work-clinical schedule. This was difficult when a student worked nights and then had to come in the next afternoon for seminar. The seminar time will be changed to allow more rest time for those who worked the previous night.

5. Should students be paid by the hospital for their clinical time as well as work time? If such a program is to be as cost-effective as possible, it may not be feasible to pay wages for clinical hours. There is also the concern from the educational setting that potential exists for some loss of course control when clinical time is paid by the service institution.

These are some of the issues being discussed in the hope of making an improved course available to students in the future. Because the program resulted in improved student learning, cost-effective quality care, and invaluable assistance to our nursing staff, we plan to offer a similar but expanded program next summer.

More detailed information about this project may be found in The Maternal Child Nursing Journal, November/December, 1983.

References

Huckstadt, Alica A. Work/Study: A bridge to practice. American Journal of Nursing, April, 1981, p. 726-27.

Schmied, Elsie. Living with cost containment. Journal of Nursing Administration, May, 1980, p. 12-17.

Suess, Linda R. et al. Nursing students experiment with reality. Nursing Educator, March-April, 1982, p. 28-33.

Whelan, Elain Gillingan. Increasing summer proficiency: A summer clinical course. Nurse Educator, Autumn, 1982, p. 28-31.

Some Research Issues in Cost Benefit Analysis in Nursing: A Nursing Perspective

by Nancy S. Creason, RN, PhD

The purpose of this paper is to discuss some research issues associated with cost benefit analysis in nursing from a nursing perspective, as yet a relatively unexplored topic by nurse researchers. A brief overview of some relevant research will serve as a background to a discussion of two major research issues. One is a problem of methodology or how the research will be done. The second is a question of territoriality or who can and should conduct the research.

Research in nursing finance and economics has been conducted by nurses, economists and others. The historic study by Johns and Pfefferkorn (1934) set the stage for nurses' concern with money. Pfefferkorn later joined with Rovetta (1940) to develop cost analysis methods to be used in nursing service and education. Fiscal issues in nursing education were studied by non-nurses (Knott, Vreeland, & Gooch, 1957; Rowe & Flitter, 1965). The 1974 Institute of Medicine Study included a much criticized report on costs of various nursing education programs. Nurse researchers Rauffenbart (1975) and Creason (1978) studied the influence of federal funding on nursing education. Brueckner and Blair (1977) studied the cost of education in the nursing department of a medical center. A costing methodology for schools of nursing was developed and used by Brown and her colleagues in 1979.

Studies in the service arena have focused on cost-benefit in the use of nurse practitioners, particularly comparing the difference in the cost of delivering medical care by nurses and physicians (Prescott, 1979). Crabtree (1978) used cost-benefit analysis principles to compare two types of preoperative teaching. An institution specific study determining cost outcomes of an all registered nurse staff was reported by Hinshaw and her colleagues in 1981.

Numerous methodological problems can be identified but the prime one is the lack of a conceptualization of nursing economics, particularly cost-benefit which in turn thwarts efforts at problem definition, operational definition of terms and identification of appropriate, valid and reliable measures.

This may be due to a problem of "fit" of traditional economic models such as marketing theory, supply and demand, and efficiency and productivity with health care delivery systems. Ro (1977) identified major problems as a lack of mechanisms to insure provider or consumer efficiency, the issue of whether to identify health care as an investment or as an entity of consumption, problems of consumer ignorance, lack of competition in the field, and the view that health care is a right.

The view of health care as an investment stems from the work of Schultz (1960, 1961) who offered the idea of investment in human capital in

education and later suggested a need to examine this conceptualization in relation to other human service entities (1970). In 1962, Mushkin wrote on health as an investment. Since this beginning, work has progressed in health and medical economics but very little has appeared in relation to nursing.

Defining cost-benefits in relation to nursing care needs to be examined. The most obvious definition of cost is that it includes those items which are recorded as costs in an agency's records -- the dollars expended as a result of the purchase of particular goods or services. Recordkeeping should have the capability of yielding cost information on particular cost units or particular processes such as the dollar cost per course credit hour or the per diem cost to provide therapy to one patient. Prescott and Sorenson (1978) offered a model which suggested this kind of accurate costing as a possibility in nursing.[1] Unfortunately for the researcher, record keeping systems are not always capable of yielding such accurate information free of extraneous costs in relation to nursing service and education.

The accountant's view of costs may be contrasted with the economist's view of costs. Micro-economists focus on fairly tangible costs related to a particular environment such as expenditures associated with patient care or educational efforts. They are concerned with decision-making about the cost of buying goods and services, the maintenance of existing capital, how these relate to the large environment and with marketing issues like the decisions of consumers to buy a service. Macro-economists look at the larger society, the total economy, including the difficult abstraction of gross national product and the meaning of unemployment statistics. This perspective holds that the economic health of each social sector is linked to the economic health of the total economy. Both levels involve less tangible costs such as opportunity costs which are related to the sacrifice of opportunities in deciding on a particular expenditure. These can be identified at a specific, person or institution, level or at the broader level of the total society.

The economists' view of cost has to do with valuing, that is, relating costs in some manner to benefits. At the simplest level, cost-benefit is getting the benefit of a dollar or more for every dollar spent. There are tangible costs such as the number of patients, students, and nursing treatments. Total benefits, however, are more difficult to define in dollar or other form. Benefits also may be defined using a time-frame in either the immediate context surrounding the expenditure, or by considering all costs and benefits as a result of a particular expenditure.

Defining economic benefits within nursing is a difficult task. It is easier to record change in disease symptomatology after the institution of

---

[1]Their model is based on that found in Attkison, C., 1977.

medical therapy than it is to measure a patient's feeling of well-being or the maintenance of physical and psychological integrity in health or illness after nursing interventions.

Benefits are most meaningful when they are compared to costs. In the purest sense, economists look at cost-benefit as including all costs and all benefits related to a particular action which could go on to infinity. This view does not seem practical for our purposes. Rather, we need to consider a modified cost-benefit analysis approach, carefully defining time parameters.

While related, the concepts of cost-benefit and cost-effectiveness often are confused. Cost-benefit has to do with whether or not the cost of nursing service is more or less than the resultant benefit. Cost-effectiveness deals with choosing a method of approaching a cost unit, the performance of analytical and mathematical procedures to aid in choosing a course of action from alternative approaches (Crystal and Brewster, 1977).

Cost-benefits and cost-effectiveness are studied to provide relevant information to those involved in decision making about money in relation to the activity in question. This may include spending money already available, making requests for money, or legislating and funding programmatic items by goverment agencies. Decision makers include head nurses, faculty, deans, directors or agencies, hospital administrators, governing boards and lawmakers at the local, state, and national level. The researcher must be mindful there are different costs for different purposes (Clark, 1923). Furthermore, it is usual that decision makers compare cost and benefit data sets so the researcher must exercise care in identifying potential future comparisons and if possible make such comparisons in the controlled research environment.

Conceptualization of cost-benefit and related research is dependent upon who performs it. An examination of a few studies conducted by economists helps focus on this problem and supports the assertion that nurses need to join with other experts to produce useful research.

Sloan and Elnecki (1979) studied determinants of professional nurse wages specifically defined as monopsony power of hospitals, union effects, wage and nonwage benefits and philanthropic wage hypotheses. Data were obtained from hospital records so the perspective was from that of the employer only. Professional nurse wages were defined as those being paid to the beginning diploma graduate. On the other hand quality of care was considered a non-issue, "for the purpose of empirical analysis of input choice decision and for wages it does not matter how quality is defined" (p. 222). At the same time, quality took on a quantitative definition of the amount of care needed, "less complex cases generate less demand for 'quality' (input-intensive) hospital services" (p. 231). This assumption that patients who require less complex medical care require minimal

"quality" nursing care confuses medical with nursing care and negates independent nursing actions. The study also reflects the view "a nurse, is a nurse."

Deane and Yett (1979) developed an econometric model to be used in market policy simulation and production which identified ten separate fields in nursing. Four of these were hospital related, including directors of nursing services, nurse supervisors, head nurses and general duty nurses. The authors acknowledged that 70 percent of all nurses were employed in hospitals, but did nothing to more clearly define "general duty nurse." They found that some nursing vacancies were the result of the employer desiring to hire at a prevailing wage when the position could have been filled at a higher wage but this was not considered to be in best interest of maximizing profits. The model was used to project effects of medicare and medicaid on demand and the effect of the Nurse Training Act on supply. The researchers dealt strictly with numbers and concluded "the initial economic impacts of the Nurse Training Act were nil" (p. 300) and further suggested unemployment of nurses may be a problem in the 1975-85 decade because of oversupply.

Economists Link and Settle (1980) studied the extent to which supply of nursing services would increase in response to higher wages and other employment inducements. Their population included married female registered nurses with a spouse at home in one standard metropolitan area in 1969. They concluded that higher wages probably would not be effective in the provision of more nursing services but would have the effect of reducing the number of hours worked. Aside from the obvious change in economic times and the need for women to work with or without a spouse in the home, important variables, are missing from this study. These include the availability of child care and factors in the nursing work environment, like those identified by Wandelt, Pierce, & Widdowson, (1981).

The examination of these studies suggest there is a need for nursing input into any research focusing on the economic sphere of nursing to define terms, identify variables and translate the languages of nursing and economics for mutual benefit. Nurses cannot afford to allow others to direct their economic destiny. Being in the vanguard of research in financial and economic concerns in nursing service and education will allow for control over this destiny. Leadership in this research must be provided from the ranks of nursing while capitalizing on the needed expertise from other disciplines especially finance and economics.

References

Attkisson, C., Hargriourves, W. & Herourtz, M. Evaluation of Human Service Programs. New York: Academia Press, Inc., 1977.

Brown, B.J., Lasher, W. F., & Embry, C.L. A costing methodology for schools of nursing. Nursing Outlook, 1979, 17, 584-589.

Brueckner, S., & Blair, E. Cost of education in a department of nursing service at a university medical center. Journal of Nursing Administration, 1977, 7 (3), 21-27.

Clark, J.M. Studies in the economics of overhead costs. Chicago: The University of Chicago Press, 1923.

Crabtree, M. Application of cost-benefit analysis to clinical nursing practice: a comparison of individual and group preoperative teaching. Journal of Nursing Administration, 1978, 8, (12), 11-16.

Creason, N.S. Effects of external funding on instructional components of baccalaureate and higher degree nursing programs. New York: National League for Nursing, 1978.

Crystal, R.A. & Brewster, A. Cost benefit and cost effectiveness analysis in the health field: an introduction. In R.E. Weeks & H.J. Berman (Eds.), Economics in health care. Germantown, MD: Aspen Systems Corp., 1977.

Deane, R.T. & Yett, D.E. Nurse market policy simulation using an econometric model. In R.M. Scheffler (Ed.), Research in health economics (Vol. 1). Greenwich, CT: JAI Press, Inc., 1979.

Hinshaw, A.S., Scofield, R., & Atwood, J.R. Staff, patient, and cost outcomes of all-registered nurse staffing. Journal of Nursing Administration, 1981, 11 (11-12), 30-35.

Institute of Medicine. Report of study: costs of education in the health professions. (2 vols.). Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1974.

Johns, E. & Pfefferkorn, B. An activity analysis of nursing. New York: Committee on Grading of Nursing Schools, 1934.

Knott, L.W., Vreeland, E.M., & Gooch, M. Cost analysis for collegiate programs in nursing. New York: National League for Nursing, 1957.

Link, C.R. & Settle, R.F. Financial incentive and labor supply of married professional nurses: an economic analysis. Nursing Research, 1980, 29, 238-243.

Mushkin, S.J. Health as an investment. Journal of Political Economy, 1962, 70 (5), 129-157.

Pfefferkorn, B. & Rovetta, C. Administrative cost analysis for nursing service and nursing education. Chicago: American Hospital Association, 1940.

Prescott, P.A. Cost-effectiveness: tool or trap? Nursing Outlook, 1979, 27, 722-728.

Prescott, P.A. & Sorensen, J.E. Cost-effectiveness analysis: an approach to evaluating nursing programs. Nursing Administrative Quarterly, 1978, 3 (1), 17-40.

Rauffenbart, S. The nurse training act and collegiate nursing education. In National League for Nursing, Converting threats into challenges - adaptations in baccalaureate and graduate education in nursing. New York: Author, 1965.

Ro., K. Health care economics: an overview. In L.E. Weeks & H.J. Berman (Eds.), Economics in health care. Germantown, MD: Aspen Systems Corp., 1977.

Rowe, H.R. & Flitter, H.H. Study on cost of nursing education. New York: National League for Nursing, 1965.

Schultz, T.W. Capital formation by education. Journal of Political Economy, 1960, 68, 571-583.

Schultz, T.W. Investment in human capital. The American Economic Review, 1961, 51 (3), 1-14.

Schultz, T.W. The reckoning of education as human capital. In Conference on Education and Income, University of Wisconsin. Education, income and human capital. New York: Columbia University Press, 1970.

Sloan, F.A. & Elnecki, R.A. Determinants of professional nurses' wages. In R.M. Scheffler (Ed.), Research in health economics (vol. 1). Greenwich, CT: JAI Press, Inc., 1979.

Community Hospital Education Services: A System of Shared Resources

by Cheryl M. Jones

Community hospitals, in an effort to keep the health care dollar at home, are recruiting specialty physicians, providing home care and converting patient rooms to critical care units. In many instances, diversifying services is a means for survival for the small, rural hospital.

Providing these services requires a nursing staff prepared to deal with the newest technologies, rising acuity levels, and the demand for a wide range of expertise.

An education program which addresses the changing climate in commuity hospitals would require an educator and a multidisciplinary staff of nursing clinical specialists. Such a resource is beyond the financial capabilities of a small hospital.

Presbyterian Hospital of Oklahoma City, through the Department of Nursing Education, Research and Staff Support Services (hereafter referred to as "Nursing Education"), has developed a solution to this dilemma with a program which brings the nursing education resources of a tertiary care, teaching hospital into contact with those hospitals requiring the resources on a part time basis.

In mid-summer of 1982, Nursing Education was asked to provide education programs to eight rural hospitals managed by the I.H.P. Corp. of Oklahoma City. The hospital was already actively promoting other services to rural hospitals. One such service, the Remote Cardiac Monitoring Network, monitors 43 beds in 21 hospitals in rural Oklahoma. This service also contains a cardiac care education component for nurses, physicians and other health care personnel. With that program as a model, Nursing Education designed a new program for monthly inservice education for the eight hospitals. The program was initiated October 1, 1982.

Program Description

One member of the department was assigned as program manager. During the initial months of implementation, the original duties and responsibilities of the program manager were redistributed among department members. As the program matured, the program manager was able to resume most of these previous activities.

Program Goals

The program was planned to meet the following goals:

1) the service should provide monthly inservice classes by nurses and other professionals who are expert in their fields;

2) the classes should be presented in the rural hospital and at times convenient to the staff of the client hospital;

3) the program should be flexible enough to allow for last minute changes; and

4) the program should be cost effective for both the rural hospital and for Presbyterian Hospital.

These goals are being achieved through special attention to two aspects of the program; the needs assessment evaluation process and the selection of instructors.

Needs Assessment

Initial class planning was based on a list of suggested topics submitted by the nursing directors of each hospital. That list has been augmented by information gathered from evaluations at each of the inservice classes. In addition, close contact is maintained with the nursing director through frequent phone calls. For the future, the program manager will conduct an annual needs assessment using a catalog of available classes. The nursing director will serve as the contact for needs assessment but is encouraged to seek input from the administrator, physicians and staff members.

New programs are added to the catalog based on requests from rural hospitals. In these instances, a list of objectives is requested in order to assure that the content of the presentation is appropriate to the audience.

Presented Selection

The most critical factor in the program is presenter selection. Specific criteria include expertise, philosophic agreement with the program, flexibility and availability. As class needs are identified, a clinical specialist, nurse clinician, or staff member is identified to present the subject. A series of meetings is held to orient the new presenter to the program. During these meetings, the class material is reviewed for appropriate content. General differences between nursing practice in rural hospitals and the tertiary care center are discussed. It is important that the presenter be comfortable with the philosophy and goals of the programs. For this reason, it is preferred that presenters volunteer rather than be assigned to the program by a supervisor. Since the individual class may be repeated up to three times in one day and there may be several hours wait between classes, the presenters are encouraged to tour the hospital and meet the staff.

The presenter is released from his or her regular duties for the day of travel and the home unit is reimbursed for the presenter's salary.

Cost/Benefits

The program is cost effective for the rural hospital because, in most cases, it is less expensive than the salary of an education coordinator. Materials, supplies, recordkeeping, presenter salaries, and travel expenses are included in the cost of the program. The costs of the program development are shared among client hospitals and Presbyterian Hospital because most classes can be modified slightly and be applicable to all participants. The program charge is sufficient to cover the direct costs of presenting the class.

Other program benefits also tend to be reciprocal. The nursing director of one client hospital reports: "The program provides an opportunity for our nurses to learn from nursing colleagues with area-specific expertise and also affords those experts with a glimpse of the diversity of skills required daily of nurses in small, general, acute care hospitals." Some nurse managers at Presbyterian Hospital view the program as an element in the staff development process, encouraging staff members to present programs as a means of developing and strengthening expertise.

Preventing Problems

Success in implementing a program like this lies in preventing potential problems or dealing with the problem as quickly as possible. One asset in dealing with problems is close communication with the client hospitals. The program manager visits by phone with the nursing director of the rural hospital at least once monthly to discuss past classes and plan for future classes. In addition, the manager visits each hospital as often as possible in order to become familiar with the hospital and the staff. These visits are usually scheduled to accompany a new presenter or evaluate a new class. Careful selection of the presenters and a thorough orientation program can help avoid conflicts such as presenters who are reluctant to travel alone or who might disagree with the program philosophy. Nurses who have never visited a small rural hospital may have difficulty envisioning the special expertise required of nurses in small primary care hospitals. One of the most crucial needs in this program is access to nursing staff with the needed expertise. Because these nurses are usually assigned in patient care areas, a separate budget and cost center for the program will separate the cost of the program from patient care costs. Patient care managers will not, then, have to justify participation in this program as part of the unit operating budget.

Future Plans

During this initial year, many adjustments have been made in the program. The program remains flexible so that adjustments can be made as necessary to better meet the needs of our client hospitals. In the future, alternate methods to present learning material will be investigated in

order to maintain a monthly program schedule even during the periods when weather makes traveling dangerous. A new dimension will be added to the program this fall when six continuing education workshops will be offered in various rural communities to make these programs more accessible. The first group of workshops will cover basic emergency nursing. If this proves successful, workshops of interest will be presented quarterly in these communities.

In Summary

A hospital based program for shared education services can decrease the cost of inservice education while providing nurses in a variety of work environments with access to nursing expertise in critical areas.

How Michigan Explored its Health Care Cost Dilemma

by Cheryl Klouzal Schmidt

The cost of health care in the United States has exceeded ten percent of our gross national product, and is continuing to climb. In an effort to understand this phenomenon, I volunteered two to three days a week during the summer of 1982 to assist a State Senate Special Committee created to "Study the High Cost of Health Care in Southeastern Michigan," and chaired by then-Senator Edward Pierce, an Ann Arbor physician and Democratic gubernatorial candidate.

In this paper, it will be impossible to describe in any detail the lengthy studies by this Committee. Instead, I will share the highlights of the questions explored and the hypotheses developed for further study, with the risk of appearing to present a "laundry list" of ideas. Many graduate students could write their theses and dissertations on the following questions. I hope this will occur. The critical issue of maintaining quality health care while containing costs will take many more months of serious study before any realistic solutions may be developed. Even the Special Senate Committee was "lame-ducked" out of existence before a final report could be written. Dr. Pierce is working on a report, and will hopefully continue the report as a private citizen.

Dr. Pierce first became interested in asking the Senate to create this Special Committee when he received data from one of the major auto companies during his work on Workmen's Compensation reforms. In a press release dated December 23, 1981, Dr. Pierce stated that "one auto company released data that, in their medical benefits package, Michigan's per-person-costs are the highest in the nation. The next highest area, in Northern California, is a full eleven percent lower than Michigan. There are some areas that seem demographically similar to Michigan (Buffalo and Albany, N.Y.) where the costs per person are less than fifty percent of Michigan!" In the same press release, Pierce stated that "it costs almost twice as much to provide health care for the elderly in Wayne County (Detroit) as it does in Kent County (Grand Rapids)." He further postulated that "if we cut medical costs by twenty percent we would save the entire Michigan population over two billion dollars per year."

The above statements are only a few of the hundreds of interesting observations one could make about the costs of health care in Michigan, especially the Southeastern sector. The Special Committee set out to explore the factors involved in these rising costs, and hopefully reach some conclusions about how best to handle the dilemma. The Committee hearings included testimony from third party payers (e.g. Blue Cross/Blue Shield, Medicaid/Medicare,) major auto companies, health care providers, and the Office of Health and Medical Affairs, which authored the 1983-87 Michigan State Health Plan. I served as one of the behind-the-scenes individuals who collected and analyzed data for the Senators on the Committee to consider. The following list includes many of the questions which were raised, and which will direct future study:

Socioeconomic and Ethnic Factors

Questions:

1. Does the unemployment rate affect the illness rate? (e.g. stress:psychiatric disorders.)

2. Does a higher-income family place more value on health care, thus seeking care more often?

3. Does a lower-income family need more health care because of poor health care leading to more chronic/acute illness?

4. Does the crime rate affect the cost of health care? (e.g. assault/battery, drug abuse, etc.)

5. Is there a relationship between race and/or socioeconomic status and the types of frequency of illnesses?

6. Do unemployed persons undergo more elective procedures/hospitalizations because they have more time? Or is the opposite true because of loss of hospitalization insurance?

7. What is the birth rate in the population under study? What is the average length of stay of maternity patients in this population?

Hypotheses:

1. People who have full insurance coverage use more health services than those with co-payment.

2. Wealthy people have illnesses diagnosed and treated early before they become more severe and harder to treat.

Hypotheses cont:

3. Low-income families are less likely to have private family doctors, so are more likely to use expensive emergency room care.

4. Infant death/illness rates are higher in low-income families, related to inadequate prenatal care, fewer in-hospital deliveries, less contact with specialists, less adequate nutrition, and poor general health.

5. A higher-income family may place more value on health-maintenance/promotion activities, thus seeking health care more often.

6. Geographic variations in age distribution may explain some of the geographic variations in health care utilization. (e.g. elderly people, infants, and children may require more health care.)

7. After controlling for education and income, non-whites may have greater need for health care services than whites.

Health Care Personnel Factors

Questions:

1. Would inpatient costs be affected by differentiating nursing care costs from room/board/linen/etc? (For example, ambulatory patients could be charged less than intensive care patients.)

2. Would an all-RN nursing staff increase the quality of care, thereby decreasing the number of complications and readmissions?

3. There are more health care providers in Southeastern Michigan (FTE per population) compared to other areas. Is this inefficiency, waste, or higher quality of care? If we simply try to contain health care costs, should we do so at the expense of quality of care?

Hypotheses:

1. Use of the "Primary Physician Program" for Medicaid clients will decrease the latter's tendency to "shop around" thereby decreasing duplication and cost. Fallacy: if MD's receive a $3/month enrollment fee per client, will they then be motivated to bring in more clients for less-than-needed services? Also, will clients feel "trapped" if they are linked with an incompetent physician?

2. Geographic areas with a higher supply of patient care physicians (relative to the area's need for medical care, as estimated on the basis of its age structure) may tend to have higher utilization of medical services, and at a higher rate per service.

3. Geographic areas with higher numbers of surgeons and other specialists may have higher rates of more expensive procedures.

Health Care Facility Factors

Questions:

1. Does the number of hospitals beds affect the number of admissions?

2. Does a high rate of office and independent lab and X-ray use reflect an increased use of pre-admission testing, or an abuse of physician-owned facilities?

Hypotheses:

1. A shortage of long-term-care beds leads to more hospitalization in more expensive acute-care beds.

Hypotheses cont.

2. A shortage of after-care homes for mentally ill or retarded individuals leads to greater use of expensive institutional care.

3. The growth of technology leads to more complex machines, higher education requirements, higher wages, and higher overhead costs for hospitals.

4. The presence of expensive equipment (eg. CAT scan) leads to increased use, not directly proportional to actual need.

5. Hospitals with low occupancy rates may not be very aggressive in policing admissions; they may even actively encourage admissions. Also, more of the following diagnoses (which could be treated on an outpatient basis) may be seen in low-occupancy hospitals; adult-onset diabetes, duodenal ulcer, bronchitis, nonneurogenic back pain, gastroenteritis, pneumonia, angina pectoris, and hepatitis. Finally, these same hospitals may encourage longer stays for the above plus these diagnoses: childbirth, appendectomy, T & A, fractured hip, and cerebrovascular accident.

6. Geographic areas with a higher number of special care beds (relative to their needs) may tend to have a higher utilization of these beds for diagnoses that would not ordinarily require these beds.

7. Hospitals with more special care beds may charge more for their regular beds and other services, because of higher overhead.

Style of Care Factors

Questions:

1. Does the number of teaching-hospital beds increase the number of procedures or lab tests and lengths of stay? In other words, do more residents/medical students lead to more or less test/complications?

2. Data showed a longer hospital stay for psychiatric patients in Southeastern Michigan. Are these patients sicker, or do they receive longer, more intensive, higher quality care? On the other hand, do they receive less frequent visits from professionals (e.g. psychiatric/nurse practitioners), thereby delaying recovery?

3. What is the rate of less-expensive outpatient surgery versus more expensive inpatient surgery?

Hypotheses:

1. A higher rate of lawsuits can lead to more defensive (and expensive) styles of practice.

Hypotheses cont.

2. Patients with medical diagnoses are kept in hospitals longer, because their physicians are paid for each visit, whereas surgeons are paid a "package price" for each procedure, regardless of the length of stay.

In summary, this paper has listed a number of questions and hypotheses related to the costs of health care. Many of these were taken from an excellent paper prepared by the Office of Health and Medical Affairs in Lansing, Michigan, titled "Regional Expenditure Variations: Hypotheses, Methods of Analysis, and Data Requirements." (August 31, 1982). A copy of that paper will be submitted to MAIN along with this paper for future reference. The files I compiled during my work with the Pierce Committee will be donated to the Michigan Nurses' Association Task Force on Reimbursement for use by that group and other interested individuals. One final comment: I highly recommend other nurses to become involved in interdisciplinary study of critical issues such as health care cost containment. I not only learned a great deal through this experience, but hope that I demonstrated that nurses do have the education and professional motivation to study such issues.

Cost Containment: Staff Nurses Can Make a Difference

by Barbara Trottier, RN

Hospital costs are continuously escalating. The costs for labor, equipment, and capital improvements have hit an all time high. Consumers feel they are expected to pay these costs without questioning inflated hospital rates. Staff nurses feel they are expected to pay for rising costs with fewer staff than necessary for safe patient care. Many staff nurses are frustrated and wondering, "What am I supposed to do?" In the past few years our hospital has taken some innovative steps toward containing expenditures. The following article is based on our experiences in the area of cost containment.

Initially hospital administration gathered figures verifying increased expenditures in various areas. In 1980 a cost containment committee was formed with representation from all hospital areas. Data gathering utilized a carefully designed questionnaire (based on a publication by the American Hospital Association in June 1979 called the "ABC's of Cost Containment for the Nurse Executive") which was distributed to all employees. From the responses, it was apparent that most staff had very nebulous ideas about actual costs of items used in their units.

Nursing administration began immediately to educate nursing personnel. Inservice meetings were held on all units. Unit specific information regarding the cost of equipment and supplies was posted. Staff were encouraged to discuss areas of excessive cost and develop their own solutions.

Our medical/surgical unit quickly identified communication as a problem area. A communication notebook was utilized to share individual ideas to contain costs. Ideas were incorporated into routines at staff meetings. When considered by themselves, individual items seemed insignificant, however they all added up. After examining the cost and use of supplies, staff began to provide their own pens, stethoscopes (the unit still has a few), and scissors. Admission kits were opened only after the patient was in the room. Many short term patients needed only a water pitcher, soap, and kleenex. When transferring a patient from the unit, we sent all charged items so the patient was not doubled billed. We monitored the amount of supplies taken into the patient's room to verify their use. We removed daily rental equipment as soon as the discontinue order was received. Less expensive IV tubing was used if piggyback medications were not necessary. We began developing standard patient teaching materials to decrease duplication of efforts so that we had more time available for nursing care.

As we began to increase communication among ourselves, our communications with other departments also improved. The physicians were reminded to charge items to patients; made aware of equipment refused or no longer needed by patients; and educated as to the cost of supplies and equipment.

In turn, physicians began to participate in the cost containment efforts and alerted us to cost issues.

Lost monies from central supplies had been averaging $10-$15 per month. With better communication between departments and daily, weekly, and monthly reports of losses, we were able to isolate the reasons for such losses and initiate corrective action. It was decided to test a new method of charging supplies. Initially, there were no decreased losses to the unit. In fact, there was a slight increase until all nursing and medical staff became familiar with the system. However, there was an immediate material and labor cost reduction in central supply. Our unit has gradually begun to have fewer "lost" supplies and it was decided to institute our charging system throughout the hospital. The head nurse of our unit was the vital link giving feedback both verbal and written to staff and other departments. Cooperation and respect between departments grew as each acted on the others feedback.

Next we worked on our medication usages. Pharmacy losses averaged $50-$100 per month in 1980. Unit staff and pharmacy staff employed some creative problem solving and developed a daily loss record to identify missing stock. The list enabled staff to track "lost drugs" and charge patients accordingly while continually reinforcing awareness and responsibility of each nurse. Stock drugs that continued to be lost were centrally located and a sign-out sheet was implemented. Staff rightfully took pride in their joint efforts which resulted in reduction of losses to $0-$10 per month. Budget print-out sheets posted in the medication room were excellent reinforcement of nursing efforts.

Linen usage was another focus of our efforts. Compiled statistics of linen usage in our hospital indicated that our unit's utilization was above average in 1980. A committee was formed to give concrete recommendations for decreased expenditures. Many were easily incorporated by all nursing staff thus realizing substantial savings. Thermal blankets were only put on beds as needed. Spreads were changed only if soiled. Rags were provided for cleaning spills rather than using towels. The only expense involved was educating staff. Action by nurses made the difference.

Labor cost was another area of focus. Since labor costs accounted for roughly 60-70 percent of the total operating budget, the people delivering the services needed to do so efficiently and in an orderly way. Nurses voluntarily took a leave of absence day, left early without pay, or used vacation time when census was low. Cooperation between shifts developed so that, when necessary, nurses were able to leave uncompleted tasks for the next shift which resulted in the elimination of unnecessary overtime.

Labor continues to be a major concern to each staff nurse because it directly affects his/her working conditions. Increased productivity definitely decreases costs. Our unit realizes that nurses are a part of management because we implement policies as well as organize and supervise

activities affecting the overall effectiveness and efficiency of the unit. Because we are managers, we have increased interest and pride in our unit. We know that we influence the quality and content of administrative decisions. We have a responsibility to communicate the factors that are barriers, and to recommend alternative methods of overcoming those barriers to administration. Administration has the responsibility of listening to recommendations, acting on them, and responding with appropriate feedback to nursing staff. Often it is necessary to identify a problem, form a committee of nursing and administrative personnel, and problem-solve together in order to implement positive changes. Within the past year, our hospital developed a Nursing Council to facilitate problem solving and improve overall hospital communications.

The Nursing Council which includes representatives from all nursing units of the hospital meets monthly and is instrumental in the presentation of concerns from nursing staff for evalauation and referral to appropriate areas. Based on feedback from all units, individual members are reviewing all hospital policies and either approving or revising them for the approval of administration. With positive action and continuous feedback to nursing staff, we are beginning to elaborate on old ideas, or develop new approaches to improve job activities. Attitudes have become increasingly more positive and productivity levels have increased accordingly.

Often cost containment is viewed as someone else's problem. Our institution identifies it as everyone's problem and the data obtained thus far in our cost containment efforts demonstrates that the action by individuals and groups do have an impact. Even though hospital cost may continue to escalate on the basis of inflation, these efforts have been successful in reducing rate increases. And as a result, everyone has benefitted - hospital, staff, and consumers. Professional nurses can take pride in the fact that they do make a difference.

ERIC Clearinghouse for
Junior Colleges
AUG 2 9 1986